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ABSTRACT

This report examines best practices in the delivery of Student Support Services (SSS), one of the three Special Programs for Disadvantaged Students known as the TRIO programs. Data have shown that participation in student support services has a positive effect on student outcomes, but many participants do not receive enough services to receive significant benefits. This study was based on case studies that were conducted of five local projects in 1996 drawn from 30 projects in the National Study of Student Support Services, a longitudinal survey of students begun in 1991. The five sites ranged from a small, rural community college to a large state university and also included an historically Black college and a small-town branch of a large, public institution. The most important common practices across the projects were: (1) a project-designed freshmen-year experience; (2) an emphasis on academic support for developmental and popular freshman courses; (3) extensive student service contacts; (4) targeted participant recruitment and participation incentives; (5) dedicated staff and directors with strong institutional attachments; and (6) an important role on campus. The dynamics of different modes of service are summarized. These include discussion of group learning, active counseling, and integrated services. Appended are reports of project characteristics in 1992 and 1996 and project budgetary information for 1995-96. (JLS)

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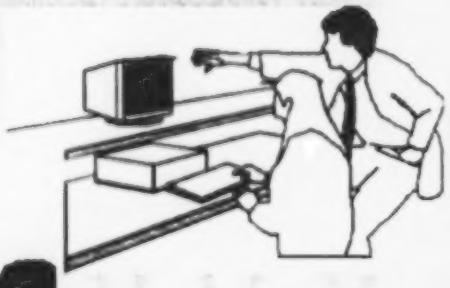
Followup Study of
Student Support Services Programs

ED 411 739

"Best Practices" in Student Support Services:

A Study of Five Exemplary Sites



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FOLLOWUP STUDY
OF
STUDENT SUPPORT SERVICES PROGRAMS

"BEST PRACTICES" IN STUDENT SUPPORT SERVICES: A STUDY OF FIVE EXEMPLARY SITES

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Chapter 1 Background

This report examines "best practices" in the delivery of Student Support Services (SSS), one of the Special Programs for Disadvantaged Students collectively known as the TRIO programs. The study is based on case studies that were conducted in five local projects during early 1996. The projects selected for inclusion in this study were drawn from 30 projects in the National Study of Student Support Services, a longitudinal survey of students begun in 1991. The five sites were selected because they showed positive individual effects on SSS participants' grade point averages (GPAs), year-to-year college retention, or both. The main part of this report will discuss what we have learned in these sites about service delivery—both the common features across the sites as well as specific details of major services. Before describing the sites and their features, however, the report discusses the context for the study, examines what is known about the effects of SSS, and outlines the concerns of SSS practitioners.

Context for the Study

Findings from the National Study of Student Support Services show that SSS achieves improvements in educational outcomes for typical participants. In relation to comparable nonparticipants, freshman-year SSS participants increase their grade point averages by 0.15 in the first year and 0.11 in the second year of college. SSS participation also increases retention to the second year of college at the same institution by 7 percent and retention to the third year in any institution by 3 percent. Perhaps equally importantly, the effects of SSS are tied directly to exposure; the greater the student's exposure, the greater the GPA and retention effects.[1]

...SSS achieves improvements in educational outcomes for typical participants.

At the same time, however, average service levels in SSS are moderate at best, thus limiting the program's outcomes. SSS serves a large number of students in relation to its resources, resulting in a median of 12 contacts per participant per year. For

[1]Detailed information on the outcomes of SSS is found in Bradford Chaney, Lana Muraskin, Margaret Cahalan, and Rebecca Rak, National Study of Student Support Services, Final Report, Third-Year Longitudinal Study Results and Program Implementation Study Update, Chapter 7, U.S. Department of Education, Office of the Undersecretary, forthcoming.

freshmen, the rates are slightly higher—a median of 17 contacts. These contacts translate into about 9 hours of service on average—14 for freshmen and 6 for other students. About 9 percent of participants have only one contact with their SSS project per year.[2] Taken at face value, these levels of participation could hardly be expected to produce large effects.

Substantial increases in overall resources that might increase per-participant service levels are unlikely to occur in the near future. Nationally, the SSS program is unlikely to experience large increases in federal support. In its early days (1970), the SSS program spent about $1,123 per participant, a rate that declined to about $532 in constant dollars by 1987. Over the past several years the rate has increased to $744, higher than 1987, but nowhere near the 1970 level.[3] It would take a massive increase in federal appropriations, or a considerable decrease in numbers of participants, to return to a per-participant resource level comparable to that achieved in the program's early days.

Given the limited resources available to projects, it is not surprising to find that the typical SSS project has a small staff. Commonly, a stand-alone SSS project will have a staff of three full-time-equivalent (FTE) professionals and one FTE clerk. It may also have 10 or so student (peer) tutors employed for a few hours a week. Elsewhere, it has been estimated that if all professional staff (including tutors) spent all their working hours in one-on-one direct service to students (no participant recruitment, no meetings, no project administration, no vacations, no sick leave, etc.) the maximum hours available during the school year would be about 32 per participant.[4]

So far, most of the federal interest in improving SSS has focused on assessing project performance. Indicative of that interest, the recently revised rules for the SSS program outline a method to follow participants and measure outcomes.[5] At the request of the U.S. Department Education of Education (ED), the National Study of Student Support Services has outline the issues in creating a performance assessment system for the SSS

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[2] Data are taken from Margaret Cahalan, Bradford Chaney, and Selma Chen, National Study of Student Support Services, Interim Report, Volume 2, Profile of Freshman Participants and Project Services: 1991-92, Chapter 3, U.S. Department of Education, Office of the Undersecretary, Washington, DC, 1994.

[3] All per-participant funds are given in constant 1990 dollars. Data appear in Margaret Cahalan and Lana Muraskin, National Study of Student Support Services, Interim Report, Volume 1, Program Implementation Chapter 4, U.S. Department of Education, Office of the Undersecretary, Washington, DC, 1994, and in Chaney et al., op. cit. Chapter 4.

[4] See Chaney et al., op. cit. Chapter 10.

[5] Federal Register, July 24, 1996.

program.[6] Implicit in the federal interest in performance assessment is the notion that greater attention to student performance, accompanied by incentives to improve performance (such as prior experience points), will further improve student outcomes.

But establishing goals and measuring their attainment is only one side of the performance equation. Without concomitant attention to project content and operations, performance assessment cannot be expected to improve effectiveness. We have already noted that resources, hence, participation levels, are modest. In addition, little is known about the specific programmatic elements, service approaches, staffing, training, etc. likely to improve outcomes. On the plus side, grantee turnover during recompetitions is relatively low, so there are excellent opportunities to try new approaches with a stable set of projects. Everyone connected with the SSS program would like to see greater positive outcomes but, presently, there is little systematic information on how to achieve that end. It is the desire to improve practice that has motivated this project and report.

Without concomitant attention to project content and operations, performance assessment cannot be expected to improve effectiveness.

Before presenting the findings about best practices, however, we would like to review briefly what has already been learned about effective practices from the National Study of Student Support Services. While the National Study was largely designed to determine the overall effects of SSS on participant outcomes, it also provides more detailed information on the specific services and service approaches that seem to make a difference for students. In addition, the National Study offers a portrait of SSS participants that, itself, suggests additional topics and directions for programming.

Implications for Practice from the National Study of Student Support Services

The longitudinal study of SSS participants has yielded a variety of findings with implications for local practice. This section summarizes information on the results with direct implications for projects. Implications come primarily from findings about the effects of specific services and service delivery approaches on student outcomes (GPA, credits, retention). In addition, the National Study's descriptive information on the population of disadvantaged college-goers provides a more detailed portrait of that population than heretofore available. This section recapitulates important findings and comments on their implications.

[6] See Chaney et al., op. cit., Chapter 9.

Implications from the outcomes analysis. As already noted, SSS has positive effects on freshman participants' GPAs, credits earned, and retention.

- Four services—peer tutoring, courses, workshops, and cultural events—appear to be effective in improving student outcomes.

- Peer tutoring is particularly impressive. With the exception of third-year GPA, peer tutoring shows significant effects for each of the three student outcomes measured in each of the 3 years studied.

- Instructional courses increase the number of credits students earn in the first year of college as well as retention at the same institution in years two and three.

...the effects of SSS services on participants are proportional to the amounts of service they obtain.

The impact of these services is even greater when only those freshman participants who receive the service are included in the analysis. Not surprisingly, the impact is also greater in the freshman year (when students in the study received the services) than in later years. There are important cautions about these findings, however, including concerns that student motivation may play an important role in both using services and the outcomes of those services.

Equally important, the effects of SSS services on freshman participants are proportional to the amounts of service they obtain (see figure 1). This illustration of the effects of peer tutoring makes the point quite dramatically. Students who receive 10 hours of peer tutoring can expect about a 0.1 point increase in GPA (e.g., from 2.3 to 2.4), but those who receive 30 hours can expect a 0.3 point increase. The relationship is linear and does not taper off for sizable amounts of tutoring (30 hours), although only a small percentage of participants receive that much tutoring.[7]

Further, two organizational approaches that were identified by the study had positive effects on student outcomes.

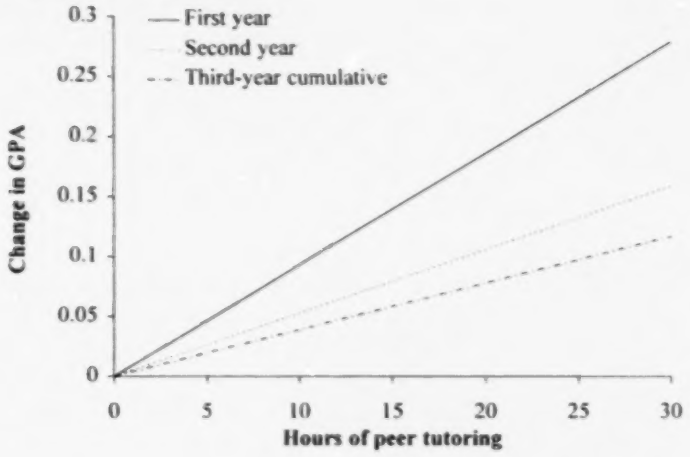
- Projects that focused primarily on serving a group of students through a case management approach (called "home-base" projects) increased participants' GPAs in

[7] The mean service hours for those who received tutoring was 13.3; only 10 percent of students who got tutoring received 33 or more hours.

their first and second years, as well as their cumulative third-year GPAs.[8]

- Projects that were part of larger service entities, such as equal opportunity programs or learning centers (rather than stand-alone projects) increased student retention.

Figure 1.
Relationship between GPA and number of hours of peer tutoring received



SOURCE: U.S. Department of Education, Planning and Evaluation Service, National Study of Student Support Services (SSS), *Longitudinal Study of Student Outcomes.*

Clearly, these findings have implications for practice. First, the findings underscore the importance of academic assistance in explaining the effectiveness of SSS—peer tutoring shows the greatest impact in that it is used by many and shows sizable effects. Second, the amounts of service received are crucial to the program's positive outcomes. The findings also remind us that the ways in which services are delivered are also important. Projects that consider each participant's needs and offer a supportive environment may have an advantage independent of the services provided. Projects that are able to draw upon a

[8] Projects were classified "all service" when they were the main providers of support services at their schools; "home base" when they focused on serving a limited subset of students more intensively, providing them with services as needed; or "dominant service" when they focused on providing a major support service at a campus (often, but not always, tutoring).

wider array of resources, or offer services in coordination with other providers, may also have an edge.[9]

Implications from the descriptive analysis. In addition to the important findings on services, the longitudinal study also describes the freshman students who participate in SSS. Aside from reflecting the differences intended in federal rules (i.e., SSS participants have greater academic need and fewer financial resources than other students), there are other ways in which SSS participants differ from freshmen who do not participate in SSS. These differences may warrant programmatic attention.

- On average, SSS freshman participants are older than other freshmen, with only 61 percent at the typical age for starting college (19 or younger).[10]

- Two-thirds of the SSS freshman participants are women and 59 percent are members of minority groups (including 31 percent African American and 22 percent Hispanic).

- Many SSS participants are the first persons in their families to have completed high school. Thirty-five percent report that their fathers did not finish high school, compared with 12 percent of all freshmen.

- SSS freshman participants proceed through college at a slower than average rate. Combining those enrolled and not enrolled in the third year, half of the freshman-year participants are still freshmen or sophomores, and many have taken only a few upper division courses.

- SSS participants are a fairly mobile population. A quarter are not in school in the third year, and an additional 26 percent have attended more than one institution. Rates of part-time enrollment have also increased.

[9] It is important to not overstate the findings, however. For example, the positive effects of cultural events may not mean that the events themselves affect students' GPAs. Rather, students who are already performing more successfully may also be more likely to form a strong attachment to the project and to attend a cultural event it sponsors. Similarly, the greater effects of more service hours may also have a motivational component. Participants who are motivated to succeed in college may also seek out more assistance from the project. In addition, effects of services used by small numbers of participants (such as professional tutoring) are difficult to capture.

[10] Nationally, 92 percent of first-time freshmen are 19 years or younger.

- Most participants work while in school, with an average of 26.6 hours a week at work in the third year for working participants.[11]

- Concern about finances remains high in the third year of school.

In addition, certain personal characteristics are associated with enrollment in the third year after entrance. Enrolled students are younger at entrance, less likely to marry and have additional dependent children subsequent to enrollment, more likely to have planned for college (e.g., taken the SAT or ACT, visited colleges, or sought advice on college from high school counselors), and more likely to have established patterns of seeking help and assistance before college and during freshman year. When asked why they are not enrolled, those not enrolled in the third year report that not enough money was a significant factor in leaving.[12]

These findings suggest directions for programming even though they do not provide direct information on effective services. The descriptive findings suggest that projects need to stress the priority of studies, offer services at convenient times, and build students' commitment to college in general as well as their institutional attachments. Projects might want to consider helping students find jobs on campus or find off-campus jobs related to their studies, seek out (or offer) day care opportunities, and seek ways of increasing financial support so students can reduce work hours. These are not traditional roles for support service projects, but they may well enhance retention.

The descriptive findings [from the National Study] suggest that projects need to stress the priority of studies, offer services at convenient times, and build students' commitment to college in general as well as their institutional attachments.

PRACTITIONERS' ISSUES IN PROJECT IMPROVEMENT

In addition to the findings of the National Study, project staff have specific concerns that also provide an important context for studying best practices. From previous case studies of 30 SSS projects, visits to additional projects, discussions with SSS staff at regional and national meetings, and a 1991-92 survey of

[11] About half the SSS participants work as freshmen. By the third year, two-thirds of the freshman-year participants are working.

[12] Over half the group (56 percent) indicated that "not enough money" was a reason for leaving. In addition, uncertainty about career plans was cited by 29 percent. Pregnancy or child care was cited by 19 percent of leavers, including 24 percent of those who started at 2-year colleges.

project directors, we have identified a wide range of concerns among SSS practitioners.[13]

- Practitioners want to improve student continuation and graduation rates.
- Practitioners face hurdles in providing services, including limited resources, student eligibility restrictions, and federal rules.
- Projects want to enroll students who are likely to benefit from services.
- Projects want to attract and retain talented staff.
- Staffs want to manage efficiently and ensure project continuation.

This section outlines each of these concerns briefly. The best practices study reported here will address some of these concerns more directly than others, but it is worth noting these issues for future studies as well.

Practitioners want to improve student continuation and graduation rates. Most staff members want to improve the rates at which participants in their projects stay in school and graduate. They suspect that they could do better, even if most do not have confirming data. Individual projects are often unable to assess their success, in part because they do not know how to find a group of nonparticipants with whom to compare the SSS students. They also do not have accurate completion rates for their participants, because many who leave their institutions without graduating eventually graduate at a different institution.

It is particularly difficult for project staff to learn which service approaches or individual services are best able to improve outcomes. They may suspect that certain approaches or services are more effective and make changes based on educated guesses about what works. Or, student demand will lead project staff to

[13] A systematic effort to determine grantee concerns was included in the project director survey conducted by the National Study of SSS in 1991-92. The survey included an open-ended item asking respondents to identify "particularly problematic" aspects of projects. The most often-cited items included tracking/record-keeping system, computer system, maintaining attendance, more staff, retention and graduation, and motivating students to seek help. Directors were also asked to evaluate the difficulty of implementing federal rules. They indicated that the full financial need requirement was the most difficult (47 percent—rule was subsequently changed) followed by proposal requirements (23 percent) and nonsupplanting of other services (19 percent). For a compilation of responses, see Cahalan and Muraskin, op. cit., Appendix B.

make changes in services. Sharing of information across projects is casual or serendipitous. A director may hear about an interesting approach that is used in another project and try to do something similar. Most of the studies of support services reported in journal articles lack sufficient rigor to warrant confidence in their claims, or simply do not provide enough information about an intervention to implement it elsewhere.

Practitioners face hurdles that include limited resources, eligibility restrictions, and federal rules. Even if excellent, systematic data on effective practices were readily available, SSS projects, as federal grantees, face a variety of important constraints on project operations. As we have already noted, they have limited resources. In addition, few institutions augment resources for SSS projects at levels that would allow sizable amounts of additional service. For example, projects included in a 1991 survey of SSS project directors reported about 14 percent of operating budgets were derived from institutional sources (excluding physical space). A review of national data on grant awards for 1990 showed even lower institutional contributions; only 10 percent of project funds were obtained from nongrant sources.

Projects also face federal rules that limit service to particular groups of disadvantaged students and have sizable effects on staff resources. The SSS program is targeted primarily to low-income and first-generation college students, but each SSS project must serve a population that is at least two-thirds composed of students with both characteristics.[14] This rule applies independent of the mix of students at a given institution. The result is that some projects can meet this requirement with little or no staff effort, while others must spend sizable resources on participant recruitment.

Projects must also meet other federal requirements that affect their choice of services. For example, one requirement is that SSS services not duplicate other institutional offerings, a provision intended to ensure that SSS services are over and above any other services available to participants. While well intentioned, this provision has sometimes led to perverse outcomes. For example, an SSS project may introduce a service that is then adopted by the institution and offered more widely. As a result, the SSS project may be compelled to move to more marginal activities to avoid "duplicating" the institutional service. This rule has also made it difficult for SSS resources to be used to extend the availability of

[14] Projects also serve students with disabilities, but this discussion focuses on the issue of service mix. In any given project, students with disabilities may be served in unlimited numbers, but at least one-third must also be low income.

a needed service to more disadvantaged students than the project can serve, which is especially troubling when the institution is composed largely or exclusively of disadvantaged students.[15]

Projects want to enroll students who are likely to benefit from SSS services. Even SSS staff who have been recruiting participants for many years express frustration that they are often unable to discern which potential participants are likely to benefit from assistance. This concern is expressed several ways. Some project staff note that motivation is a problem. By that, they mean that many students sign up for services but then fail to keep appointments or stop attending workshops or classes. Others note that participants have so many demands on their times and lives that they may come to the institution for a semester or a year, but they disappear over the summer. Projects are always trying to figure out ways to determine, a priori, who is likely to stay the course. They also seek incentives that will keep participants coming back.

But the question of who is likely to benefit also raises another question, one most often faced by projects in institutions with large numbers of economically disadvantaged students. These projects rarely have difficulty filling up their participant rosters. The issue they face is which students to serve from among those who are eligible—the students likely to be able to use to greatest advantage the small amount of service SSS can provide, or students with the greatest academic needs? For projects at 2-year colleges, this issue was recently addressed at the national level when the SSS legislation added transfer from 2- to 4-year institutions to the national goals. Some 2-year institutions that had been focusing on the most academically needy students shifted attention to more capable students who were more likely to be able to transfer with limited assistance. Nonetheless, questions about how to select the participants for whom the project can do the greatest good is one with continuing applicability in both 2- and 4-year colleges.

Projects want to attract and retain talented staff. To an institution, SSS is "soft" money. Even SSS projects that have been in existence for 20 years or more still must compete for re-funding every 4 or 5 years. And while incumbent projects have an advantage in competitions because they may gain up to 15

[15]While this discussion highlights several important regulatory and policy issues, not all of those issues yielded findings in the sites in this study. We did see interesting ways in which projects dealt with scarce resources (discussed later in this report), but we did not see comparable solutions to some of the other issues. In general, staff in these sites share the regulatory concerns of projects in general.

additional prior-experience points, a small percentage of projects is de-funded in each competition. As a result, it is sometimes difficult for projects to attract highly qualified staff, and it is even more difficult for them to retain those staff over time. The implementation study conducted by the National Study documented the short tenure of many SSS staff. Among the sites in the implementation study, the average project director had held that (or another) SSS position for almost 9 years, while all other professional staff had been with the projects for an average of a little over 4 years.[16]

Some staff turnover is probably good. As new people join an ongoing project, they bring enthusiasm and new ideas. But there is a level of staff turnover that can be counterproductive and adversely affect service delivery. In the case studies conducted by the National Study, staff in many sites indicated that it was particularly difficult to retain professional counselors and tutors. Some joined projects because it was a way of gaining entree to the institution, but their loyalty was limited. In general, when regular institutional appointments became available, staff applied and, if successful, left the projects. Project directors usually could not overcome the attractiveness of "hard money" positions, even if they could pay comparable wages. Ironically, some projects have gained or retained staff because college budgetary problems have led to layoffs or have made SSS positions look more secure than other college jobs.

Another problem in retaining staff is that as staff acquire years of service, their salaries rise. Usually, salary rates and increases are governed by college rules. When project budgets do not rise commensurate with those pay increases (or federal funds increases are accompanied by federal directives that increase costs—such as serving more students), a long-time staff member becomes increasingly expensive. A desirable feature, greater tenure, has now become a liability to the project.

Projects also face other staffing issues; for example, what backgrounds best prepare persons to deliver the kinds of services SSS provides? What specific training, preservice and inservice, is most useful for SSS staff? Of course, these issues are sometimes specific to the kinds of services being delivered, but there may be some lessons from projects that appear to be successful that others can apply.

Staff members want to manage projects efficiently and ensure the continuation of their grants. Though they may have been hired for their skills at counseling or instruction, most SSS project directors (and other staff) must also administer staff,

[16] These averages include vacant positions (counted as zero).

authorize purchases and keep track of budgets, maintain student files, coordinate with other providers, evaluate their own performance, and do all the paperwork necessary to demonstrate compliance to institutional and federal officials. At present, projects show varying capability to do all of these tasks successfully and efficiently.

Many project directors would like to have more efficient administrative capabilities, but they simply do not know where to start. For example, most projects do not know how much service they provide on an ongoing basis. Since this information has not been requested in federal reporting forms, it has received little attention from projects. Even at the end of the year, most projects would have to hand tally every staff member's work records or every student's hard-copy file to find out the average or median number of contacts or hours of service per participant. Perhaps even more significantly, many projects do not have computerized student records that combine student background and course data with information on which services students have received, even though both types of information are required separately in federal data reporting.

These are just some of the problems that projects face. With these types of issues in mind, we visited five projects that have demonstrated significant positive effects on student outcomes (GPA, retention, or both) to see how those projects operate and how they have addressed these issues. The rest of this report describes what we learned about effective practice in these five sites.

Chapter 2 The Case Studies of Best Practices

To conduct this study of best practice, the project- and student-level data from the National Study of SSS participants were used to identify individual projects that appear to be making a positive difference for their students. Several projects showed statistically significant site-level effects on student GPA, retention, or both. We were able to visit five of these projects to try to understand what the projects do and how their activities yield those positive outcomes.

Several projects showed statistically significant site-level effects on student GPA, retention or both [in the National Study].

There are a number of caveats with respect to the strength and interpretation of the findings presented here. First, what we describe in this report is by no means the full range of possible best practices. The universe of projects from which we selected these five sites included only the 30 projects in the National Study's longitudinal examination of student outcomes. There are currently over 700 SSS projects nationwide, and many more would have met the study criteria had the data been available. Secondly, the National Study was not designed to identify site-specific effects, and there may have been other sites among the 30 that were comparably effective but did not demonstrate statistically significant positive effects in our study. For example, an individual site may have had only a small number of freshmen included in the study, so that only a large effect would be statistically significant. Or, an individual site's comparison group may not have been equivalent in some important respect to the SSS participants and, therefore, it was impossible to determine the impact of SSS. All in all, these five sites provide only a limited view of effective practice.

...there may have been other sites among the 30 that were comparably effective but did not demonstrate statistically significant positive effects in our study.

The five sites in the best practices study range from a small, rural community college to one of the largest state universities in the nation. The sites include an historically black college and a small-town branch campus of a large public institution. To protect the identities of the five sites, we have given the projects new names—The Bridge, Aim High, The Community, Project Surpass, and Project Success. Also note that our visits were conducted 4 years after the students in the longitudinal study obtained project services. Some project staff have changed and some services altered, although the services at most sites are roughly the same as they were 4 years ago.

The five sites in the best practices study range from a small, rural community college to one of the largest state universities in the nation. The sites include an historically black college and a small-town branch campus of a large public institution.

A description of each of the sites is contained in the narrative that follows, and a data display that summarizes services in each site in both 1991-92 and 1995-96 is included in appendix A.[17] The discussion has two parts—an examination of the commonalities of practice among the five sites, followed by a description of specific services.

COMMONALITIES AMONG SUCCESSFUL PROJECTS

This report describes some of the most important commonalities of practice we observed across the five sites. These projects share:

- **a project-designed freshman-year experience for most or all participants,**
- **an emphasis on academic support for developmental and popular freshman courses,**
- **extensive student service contacts,**
- **targeted participant recruitment and participation incentives,**
- **dedicated staff and directors with strong institutional attachments, and**
- **an important role on campus.**

We do not know that these commonalities of approach and practice are the reasons these projects are successful, but we know that these features are important elements of successful projects.

Not every successful project reflects every one of these features, but each of the five highlighted sites have most of them. Along with a description of the features at each site, the site itself is also briefly described to enable the reader to understand the context for the practice being described. We do not know that these commonalities of approach and practice are the reasons these projects are successful, but we know that these features are important elements of successful projects.

Nor can it be said, with complete assurance, that these features are not common among SSS projects as a whole (and, hence, of no more importance than any others). The previous implementation study of 30 sites did not find that these

[17] Only two changes appear to be significant. One project shifted from one-on-one tutoring to supplemental instruction. A second project expanded its mentoring services so that they have essentially become an intrusive advising program for some participants. Both changes are noted later in the report and in the data display on project services.

approaches were the norm across projects, but at least some of these features were found in more than the five projects studied here. This report can simply be used to describe what is seen in these sites and to comment on why these approaches *may* help to improve student outcomes. It should be noted, however, that many of the practices found in these sites reflect the effective services and organizational strategies identified in the longitudinal study.

I. A Project-Designed Freshman Year Experience

"Home-base" projects predominate among this group of five, but at least three of these projects go well beyond offering a comfortable refuge at the school. In effect, these projects **shape the initial educational experience of the students they serve** and maintain considerable control over survival at the institution. The projects act as the main point of entry for the students, in some cases playing a role in admission decisions. The projects heavily influence course selection, provide course instruction and supplemental instruction (SI), and help students adjust to the institution. The SSS project is the primary lens through which the student initially views the college. Key elements of the system include the following:

In effect, these projects shape the initial educational experience of the students they serve...

- The SSS project is linked to admission. In two instances, the SSS project helps to determine which students will gain admissions to the institution from among students who do not meet the regular entrance requirements (i.e., project staff conduct a special admissions review). In a third case, the project does not select the students, but the availability of the SSS project allows the institution to offer special admissions to some students who are then required to participate in SSS.

- The SSS project staff oversees the freshman year. SSS plays a critical role in the instructional program of participants, essentially determining the initial courses they will take, whether they can drop courses, whether they are placed on probation, etc. The projects use an "intrusive advising" approach (described in detail later in this report) with multiple advising/counseling sessions, midterm evaluations, and referrals or additional services as needed.

- SSS staff members try to ensure participants a positive instructional experience. Students are strongly encouraged to enroll in freshman courses in which they are likely to perform well and discouraged from courses that may be too difficult.

- Projects also provide instructional assistance—courses, supplemental instruction sections, labs, and study groups.

- The overriding message is supportive but firm. If you follow what we tell you to do—enroll in the right classes, attend regularly, use the academic support we provide—you will succeed at this institution.

The Bridge is located at a large, relatively selective, public institution. This SSS project is directed at "special-admit" students who do not meet the regular entrance criteria but show promise of succeeding at the institution. Non-SSS institutional officials decide who is admitted, but the students are admitted on the condition that they participate in an SSS-sponsored pre-freshman-year summer program, followed by continued SSS participation during at least the freshman year.[18]

The summer component is a 6-week head start on classes. The summer program is designed so that students enter the fall term with at least 6 and potentially as many as 10 hours of credit. Participants receive gift and grant aid sufficient to pay for tuition, room, and board. They take developmental as well as college-level courses, and all participants have been preenrolled in English, reading, and study skills classes. Students are provided with advising and counseling services, and with tutoring in English and reading as needed, all supported through SSS. There are about 6 or 7 hours of instruction and assistance per day. All students are required to enroll in 6 credits and most take 8-10 credits. If the classes are developmental, they are accompanied by credit-bearing labs. The students live together in a dorm with an SSS staff member as dorm monitor. They also attend seminars presented by university staff and community leaders (on registration, financial aid, support services at the institution, etc.) and receive academic advising on fall course selection and requirements by the SSS staff. Students incur no out-of-pocket costs.

The summer program is followed by required first-year monitoring and additional assistance as needed. Although all students are now using the main university advising center, they are also expected to make appointments with SSS counselors at least three times each semester. The core of the service is academic monitoring, especially midterm assessment. SSS staff receive information from professors on the educational progress of all participants. Those who are having difficulty are

[18]There is an additional program for special-admit students who do not meet the SSS criteria but are members of minority groups.

contacted and attend required sessions to discuss a course of action. Decisions are made about whether to drop courses or seek tutoring (from the university tutoring center). Students who do not maintain counseling appointments are sometimes dropped from the SSS project and the institution. Students who fail to show up for two scheduled tutoring appointments can also be dropped. There are some required SSS workshops as well.

Similar procedures are maintained for second-year participants, although there is less contact with the project in most instances. Only two counseling/advising sessions per semester are required in the second year, and students generally drop in rather than make appointments. Second-year students on probation are treated like first-year students, however, and still risk suspension if they do not show up for appointments or fail to attend tutoring sessions. In other words, this project puts the bulk of its resources into the prefreshman summer program, but maintains a strict advising function and monitors attendance during the first year.

...[one] project puts the bulk of its resources into the pre-freshman summer program but maintains a strict advising function and monitors attendance during the first year.

Project Aim High operates differently but also maintains substantial control over participants' freshman year. Embedded within this SSS project at a small state college is the special-admit educational opportunity program (EOP) for the institution. SSS staff help determine who is admitted and then take responsibility for those students' freshman year.[19] SSS personnel review all rejected admissions applications as well as the waiting list, late applications, and applications from potential transfer students. If an applicant does not meet the institution's standard admissions criteria but looks promising to the SSS staff, he or she is contacted by SSS and invited to take a day-long battery of tests and have an oral interview as a prerequisite to admission. The SSS staff member on the admissions review committee then makes a recommendation that is usually accepted by the committee. The student is told that SSS participation is a condition of admission.

Once accepted, the project maintains considerable control over the EOP students' courses and progress. SSS advisors must approve all course selections and petitions to drop courses. EOP participants are required to take at least one 3-hour-per-week SSS-sponsored study skill lab. The labs are supplemental study sections (i.e., supplemental instruction) attached to large, required, lower division courses. EOP participants are also

[At another project] SSS advisors must approve all course selections and petitions to drop courses. EOP participants are required to take at least one 3-hour-per-week SSS-sponsored... supplemental study section...

[19] In addition, the project invites other qualified students to participate in SSS, but these participants do not experience quite the same SSS control over their progress. None of the projects in this study recruit students to their institutions. Rather, they may review applications from unsuccessful or borderline applicants.

expected to enroll in SSS-sponsored noncredit courses that go well beyond the institution's basic developmental offerings.[20] Many also attend SSS-sponsored weekly 1- or 2-hour study groups led by both peer and professional staff. Like The Bridge, EOP participants in Aim High are expected to attend at least three advising sessions each semester, one of which is a midterm evaluation. During these sessions, EOP participants may also ask for help with class assignments, because the advisors also conduct the labs, classes, and study groups. Also, like The Bridge, Aim High provides little one-on-one tutoring; instead, the project refers students to the college tutoring center if additional help is needed, but project staff monitor those appointments. SSS staff members decide whether EOP participants will be placed on probation or kept off probation for a semester even if their grades are poor. Staff may also overrule suspensions, or decide to suspend a student even if the college rules allow the student to remain enrolled.

The Community serves at-risk students at a large state university. The Community is located within a special-admit college at the university that accepts students who fall within a range slightly below regular admission standards on a first-come first-served basis, with certain targets for urban and minority students. It also reserves a relatively small portion of its slots for students who would not otherwise be eligible (i.e., they fall below the special college's eligibility range). SSS staff participate in the selection of students for these reserved slots (the students write essays and fill out a survey) and the SSS project makes a special effort to enroll students admitted in this process into the project. Enrollment in SSS is not a condition of admission, but the SSS staff monitors the registration process to make sure SSS enrolls most of the students in the reserved slots and to influence their course selections. SSS also enrolls other students from the special-admit college.

[In one project] participants... have several meetings with their advisors, have midterm evaluations, and are encouraged to enroll in particular classes where success will build confidence.

In The Community, participants are guided through the freshman year much like those in The Bridge and Aim High. They have several meetings with their advisors, have midterm evaluations, and are encouraged to enroll in particular classes where success will build confidence. Participants are also enrolled in SSS-sponsored supplemental instruction and in a limited number of SSS-sponsored math courses. Because all SSS participants are also enrolled in the special-admit college, they take the bulk of their classes from a designated core

[20] These courses are used to qualify for full-time status but do not count toward a degree. SSS participants can take these courses without cost, although other remedial courses are operated by the institution on a fee-recovery basis. This status provides a financial incentive to participate in SSS.

curriculum within that college that is, itself, tightly controlled. The college is a sheltered environment where students gain academic skills and confidence to make a transition to the degree-granting colleges of the university. In that sense, it is the college, as well as the SSS project, that structures the students' initial educational experience. Within that environment, however, the SSS participants receive the most intensive and directed instructional and advising effort. This project also places a premium on participant activities and events to build group cohesion as well as institutional identification.

The other two projects in the study do somewhat less in directing the students' overall educational experience, but still probably more than most SSS projects. Enrollment in these projects is not linked to college admissions. In Project Support, located at an historically black college, students seek out the project primarily to obtain tutoring, although the project does require participants to attend counseling sessions once enrolled, including a midterm assessment. In Project Surpass, a community college SSS project, participation in SSS is closely linked to enrollment in developmental courses. The SSS project supports the required computer-assisted labs for the most basic remedial courses and enrolls participants largely from the pool of course participants (all eligible lab participants are enrolled in SSS). Once enrolled in SSS-sponsored developmental labs, the participants are also assigned to receive advising/mentoring through SSS, and may receive tutoring as well. SSS staff advise students on what classes to take and how to obtain financial aid, and strong relationships between staff and participants are often established. The mentoring/advising component has been expanded since the 1991-92 school year. In a community college, where it is almost impossible for a project to attract participants at the point of college entry, the link between SSS and developmental offerings provides a way of gaining early access to students with academic need.

Once [students in one project are] enrolled in SSS-sponsored developmental labs, the participants are also assigned to receive advising/ mentoring through SSS, and may receive tutoring as well.

II. A Focus on Academic Support for Developmental and Popular Freshman Courses

The strong emphasis in all five projects on freshman-year services is designed to **give students the academic skills and confidence to continue in and complete college**. The staffs of the projects are familiar with theories about the importance of freshman year and institutional integration in college continuation. They are also quite concerned about the limited previous educational and life experiences of their participants. They report that many SSS participants lack the

confidence for such basic acts as asking a question of a professor when they do not understand a lecture. These sentiments were reiterated by the students who were interviewed; many indicated that when they arrived at college they often came with determination but also with limited experience, fear, and unpleasant educational memories. The project staff and services sent the message that they could be successful if they applied the effort.

There is an underlying belief, built through experience, that almost anyone can surmount initial educational disadvantage with the right combination of instruction, study, and a supportive environment.

All five of the projects put their service emphasis on academic support, although several also apply a strong dose of advice and nurturing. There is an underlying belief, built through experience, that almost anyone can surmount initial educational disadvantage with the right combination of instruction, study, and a supportive environment. They may describe it with different words—"holistic," "skill building," etc.—but the goal is developing a student with strong academic skills, self-confidence, and career goals. Unlike many other SSS projects, none of the projects in this study focus exclusively, or even primarily, on advising and counseling. Counseling is an important component, but its content is aimed squarely at meeting educational requirements. Nor are the projects devoted exclusively to academic support, operating like a learning or tutoring center. The bulk of their service hours are devoted to the subject matter the students must learn, but they also give lots of direction on courses and requirements, as well as emotional encouragement.

Most academic services support and reinforce the regular college instructional offerings. The main academic services include the following:

- **Supplemental instruction (SI)**: Although it has different names in the two sites where it is offered (recitation sections in one, study skills labs in the other), these regularly scheduled instructional sessions are linked to specific courses and devoted to reinforcing the information and skills taught in the regular classes (developmental or freshman). These sessions are led by subject-matter specialists, use a lecture format, and may or may not bear credit toward full-time status.[21]

- **Course instruction**: In three sites, SSS-sponsored courses offer instruction in basic skills—English and math,

[21] SI did not carry credit toward graduation in either site, although it does carry such credit in some institutions. In one site, it did not carry credit toward full-time status although it had in the past (performance in SI did influence the overall course grade, however).

- primarily—as well as in applied skills students need in college (such as computer literacy, studying and comprehending, using college services).[22] SSS-sponsored courses usually provide credit toward full-time status but often do not provide credit toward graduation.

- **Laboratories**: One site offers computer-assisted instructional laboratories (CAI labs) in conjunction with developmental courses. The labs are staffed by specialists, and students work singly or in small groups to apply and practice skills taught in regular class.

- **Study groups**: Less formal than supplemental instruction or CAI labs, one site offers regularly scheduled group tutoring sessions attached to regular courses. They are led by persons knowledgeable about the subject matter (professionals or students who have taken the course) and use a combination of lecture, question and answer, and group discussion.

- **Tutoring**: Four projects offer tutoring, although it is quite limited in two of them. Most tutoring in these projects is one-on-one assistance in which a student reviews assignments or exams with a more experienced student or, less commonly, with a project professional. Tutoring ranges from structured sessions (e.g., reviewing a previously prepared draft essay or bibliography) to informal sessions (e.g., a tutor and a student jointly complete a required homework assignment).

Although tutoring is the most common SSS service nationally (based on hours of service provided), it shares the spotlight with other forms of academic support among these projects.

Although tutoring is the most common SSS service nationally (based on hours of service provided), it shares the spotlight with other forms of academic support among these projects. These other forms include courses (three sites), supplemental instruction (two sites), and CAI labs (one site). One-on-one tutoring is a major service in two sites (Project Support and Project Surpass). It is offered during the summer residential program in The Bridge; during the school year, participants are given priority at the university's tutoring center. The projects offering SI (Aim High and The Community) provide very little one-on-one tutoring, although The Community offered considerably more in 1991-92. Project Surpass offers a combination of CAI and one-on-one tutoring. Only Project Support focuses on tutoring as the main form of academic assistance. Given the overwhelming dominance of peer tutoring among service hours in the longitudinal study of SSS

[22] In one of the sites, SSS course offerings are limited to a learning skills course with a small enrollment, however.

projects, the emphasis on other forms of academic assistance among these projects is noteworthy.[23]

Perhaps the most extensive mix of academic services beyond tutoring occurs in project Aim High. This project offers SI for lecture courses that fulfill general requirements. These labs are taught by SSS staff with backgrounds in the subjects being taught. The staff members attend the course lectures with the students and usually hold the SI sessions immediately before or after the lecture. The format is a combination of lecture and question and answer (Q&A). SSS instructors restate and underscore the information in the lectures, help students understand what information is important (to remember and study for exams), review homework assignments, offer practice exams, and provide assignments that build conceptual understanding of subject matter. Students who may have been afraid to ask questions in the lecture feel more comfortable discussing the material in the SI sessions. The sessions also give the instructors opportunities to impart information about college requirements, to set up individual advising appointments, promote upcoming workshops, and alert students to registration, drop dates, and other deadlines.

Aim High offers additional academic support through courses and study groups, as well as a limited amount of tutoring. The courses are of two types—more advanced developmental courses and short-term special-skills courses that teach study skills or basic computer skills. The same staff that provide SI also teach the courses, which use similar formats (lecture and Q&A) as well as small group discussion. Study groups met once or twice a week and include about six or eight students and a staff member or peer leader (upper division student). The groups review lectures, homework, and prior exams, and prepare for upcoming papers and exams. In addition, the project offers one-on-one tutoring to ESL students on a very limited basis. Other participants are referred to the college tutoring center.

[23]Part of the reason for the differences between these projects and the results of the longitudinal study may be methodological. The longitudinal study collected project-level service data using the same service categories included on the federal performance report forms. These categories have the advantage of being familiar to projects, but they also have liabilities. They do not capture certain services categories that are increasingly important, such as supplemental instruction. And the categories lack definitions to ensure that projects are coding the same service the same way. As a result, a weekly group study session attached to a freshman course might have been coded as "group tutoring" in one project, an "instructional course" in a second project, and a "lab" in a third.

Project Surpass' academic program includes CAI labs and one-on-one tutoring.[24] The greatest amount of service (in terms of contact hours) occurs through CAI labs. For students enrolled in developmental education, mandatory labs augment the most basic courses (grammar skills and introductory mathematics) and are staffed by SSS lab supervisors. Almost all students needing developmental education at this community college qualify for SSS, so they also qualify for the labs. Materials are self-paced and students must complete a required number of units by doing a tutorial, passing a post-module test, and then passing a classroom exam given by the instructor. Lab supervisors answer questions and help students with unfamiliar concepts.

The lab supervisors encourage students who appear to need additional help to enroll in SSS-sponsored peer tutoring. In addition, faculty members often refer students to SSS for tutoring. Tutors are recruited from among students who have completed at least 12 units and have demonstrated ability in the subject area. Tutoring is seen as helping the tutor, perhaps as much as the tutoree, reinforcing academic skills and increasing confidence. Tutoring for math and science courses is the most common. The amount of tutoring, relative to CAI, has increased over the past several years. SSS is the only source of free tutoring on campus.

Over the same period, The Community has shifted its emphasis from one-on-one tutoring to group supplemental instruction for the core curriculum. When the longitudinal study began (1991-92), this project showed the vast majority of its contact hours in one-on-one peer tutoring. It now focuses heavily on what it calls recitation sections (a form of supplemental instruction) in conjunction with required freshman courses (currently: multicultural relations, biology, and world history). The Community shifted to supplemental instruction primarily because staff believed the change would allow it to hire talented staff, increase tutoring contacts (in relation to funds), and improve educational outcomes.

Part-time SSS instructors, drawn largely from the population of older graduate students, offer weekly 3-hour sessions that review texts, clarify lectures, and use Q&A to recall and reinforce lectures. They also take every opportunity to teach study skills, critical thinking, note taking, test taking, etc. Some of these instructors are also teaching other classes in the same college, so SSS participants see them in several capacities.

[24] The project has also offered a learning skills course periodically, but enrollment has been quite limited.

This project also tries to create other opportunities for its participants to study together. It sponsors special, reserved sections of two heavily subscribed math courses, which are taught by an SSS staff member. It also tries to register SSS participants in certain sections of developmental English courses that are not SSS sponsored, so participants can receive special attention. As an inducement, SSS has sponsored a computer lab and tutors attached to the sections with SSS participants to relieve the course instructor of additional work.

The most traditional of the academic support approaches among the sites is probably the one-on-one tutoring approach of Project Support. Project Support draws its participants from people who seek out tutoring, which is its main service. It offers tutoring for a wide range of lower and upper division courses. The tutors are upper division students who have been recommended by faculty and have GPAs of 3.0 or above. Unlike the other 4-year colleges in the study, Project Support is located at an historically black college that does not have other sources of free tutoring. Once enrolled in tutoring for a course, students are guaranteed that they will not fail the course, provided that they continue to attend all tutoring sessions.

III. Maximizing Student Contact

...the projects...see their participants more often than is the case in the typical SSS project.

Not all of the projects may have consciously sought to accomplish this goal, but one feature that sets them apart is that they see their participants more often than is the case in the typical SSS project. They do not spend more money per participant to accomplish this goal. Instead, **they seem to make efficient use of staff and they offer services that can be provided to more than one participant at a time**. Data from the longitudinal study show that this set of projects had medians of between 16 and 53 contacts with each participant. Median contacts for SSS projects as a whole was 17.

Some of the key elements in maximizing student contact include the following:

- **Group services predominate.** All of these projects provide group services to some degree. Supplemental instruction (including labs) is the most common such service, but the projects also provide noncredit courses, study groups, group advising, workshops, and group extra-curricular activities.

- **Staff time is used to advantage**. In addition to group services, contact hours are increased by employing full-time professionals at the college (or in TRIO) on a part-time basis. Some projects use the same staff to deliver academic and advising services.

- **Activities that take time from staff contacts with students are kept to a minimum.** Project directors are seen as "running interference" with institutional officials, freeing staff to serve students. Staff do not have myriad institutional committee responsibilities, for example.

- **Resource levels are typical of SSS projects.** In general, these greater amounts of service are delivered in projects that do not differ from the average project with respect to federal and overall resources.

Group services. Group services are probably the main reason that these projects show greater than average hours of service. As already noted, The Bridge provides a 6-week summer residential instructional program combined with group workshops, tutoring, and one-on-one advising. This approach clearly maximizes student contact since the participants are living and working together over an extended period. Aim High delivers most of its hours of service in group settings through course instruction, weekly 3-hour study skills labs for freshman courses (i.e., supplemental instruction), weekly small-group tutoring sessions for additional freshman courses, and periodic workshops. This project also operates a series of group advising sessions for participants. Only the academic advising for the special-admit EOP participants is one on one. Project Surpass offers several CAI labs that have the capacity to serve multiple students simultaneously, as well as periodic workshops.

Group services are probably the main reason that these projects show greater than average hours of service.

The Community employs a wide variety of group processes. This project aims to build institutional attachments through project attachment. As a consequence, it not only provides supplemental instruction for several freshman courses as well as workshops and required group advising, but it also operates a series of special events and activities developed and operated by students. For example, the project offers weekend parent-student sessions that meet before exams and provide day care, giving students a chance to study without distractions. Students in the project have formed an advisory board that meets at least monthly and has conducted activities ranging from a *Cinco de Mayo* fundraiser to organizing SSS participants to fight a proposed closure of the college in which the project is housed. In addition, the TRIO staff uses SSS participants as Upward Bound tutors. TRIO staff hold joint events for Upward Bound,

SSS, and McNair participants, giving SSS participants an opportunity to both serve as role models and plan their futures. Through these activities, The Community tries to build bridges across TRIO programs and generations.

Both Aim High and The Community have offered less one-on-one tutoring over the past 4 years than when they first began. The staffs of these projects see definite advantages to group tutoring sessions and supplemental instruction in furthering their overall aims. Students learn from each other as well as the instructor, and the group setting reinforces the message that everyone needs similar help. It also builds attachments to the project and the institution. These projects convey the message that seeking assistance is not a sign of weakness. Rather, it is a critical part of being successful in college.

Aim High and Project Surpass both offer about a half dozen workshops for participants each semester. The Project Surpass workshops deal with study skills such as note taking, test taking, and overcoming math anxiety as well as more how-to topics such as budgeting for college and transferring to 4-year schools. At Aim High, study skills are taught in the courses and SI, and the workshops focus on meeting general education requirements, career planning, and the institution's preprofessional offerings. One recent workshop gave students the opportunity to take the MBTI.[25]

...several... projects rely on professional staff who are not full-time SSS employees... and that reliance probably has the effect of increasing the amount of student contact per FTE employee.

Staff time. If you asked the five project directors in this study whether they would prefer to hire full-time or part-time staff, they would all probably say that having full-time staff is preferable. Some projects have had to shift from a largely full-time staff to a mostly part-time staff because the staff members are (or have become over time) too expensive to employ on a full-time basis. This change is widely regretted. Yet several of these projects rely on professional staff who are not full-time SSS employees to provide a good deal of their academic and advising functions, and that reliance probably has the effect of increasing the amount of student contact per FTE employee.

First, as we have already noted, many of the part-time SSS professional staff employed on these projects are actually full-time, or nearly full-time, employees at the grantee institutions or in the TRIO program. They may teach SSS SI sections or advise SSS participants on a part-time basis, but they teach other classes and/or advise other students for the rest of their time. The result is that SSS participants have contact with these staff members at times other than just the SSS classes or advising

[25] Myers-Briggs Type Indicator, a widely used personality test.

sessions, since the staff members are on campus a great deal of the time and the SSS participants may be enrolled in their other classes or may drop in at a time when the staff member is not "officially" conducting SSS activities. In one case, SSS academic advisors are also providing less intensive advising for other students and are receiving far more training and supervision through their institutional advising than SSS could itself support. SSS projects are, in effect, piggybacking on other instruction, training, and support services.

Second, part-time employees are more likely than full-time employees to be relieved of administrative duties, enabling them to devote virtually all of their SSS time to student contact (or preparation for student contact). Since they may be employed for as little as a third of their time on SSS, they are not expected to attend a large number of institutional meetings, represent SSS on college committees, or participate actively in professional meetings. Thus, they are free to devote more time to students.

This is not to suggest that full-time employment is undesirable. Clearly, a full-time employee is likely to have a greater commitment to the SSS project. What it does suggest is that SSS project directors, with extremely limited per-participant resources, are thinking creatively about effective use of staff. One way to do that is to blur the project boundaries by using part-time professional staff who are already on campus and can extend the amount of service significantly. A project that relies on full-time staff exclusively can rarely move beyond three professionals (one of whom—the project director—often provides little or no direct service to students) and a group of seven or eight peer tutors, each of whom provides a maximum 10 hours of service a week. Further, the project is locked into the range of capabilities that the three professionals can offer, making change difficult. In contrast, projects in this study that use less-than-full-time staff have six or more professionals engaged in the project.

There is another important reason to consider a mix of staff. In the longitudinal study we saw that there is relatively rapid turnover among SSS staff below the project director level. This occurs, in part, because SSS is "soft money," even when the pay is equal to that of other, comparable college employees. In a project where only two or three professional staff are engaged in direct service, the departure of one staff member can greatly disrupt project operations. Because a staff of part-time employees is usually larger, the departure of a single employee does not threaten as major a portion of the SSS project offerings.

The role of project directors. Like most of the projects in the longitudinal study, all but two of the projects in this study

had directors who did not provide formal services to students. Given that these projects delivered considerably more service per participant than the average project, the lack of additional service hours may not be an important concern. Most project directors interact with students informally, of course, and they also provide other important services that extend the overall amount of student contact. Several also play an important role in identifying potential participants by reviewing admissions data and interviewing possible participants.

Staff interviewed in these sites spoke about the directors as "running interference" with institutional officials and insulating the staff from institutional politics. Directors get involved when changes in institutional policies affecting SSS participants, such as changes in admissions or financial aid, are proposed or implemented.

Perhaps the most important function played by project directors in this study to expand the amount of service is in motivating the rest of the staff and enabling it to devote its time to serving students. Staff interviewed in these sites spoke about the directors as "running interference" with institutional officials and insulating the staff from institutional politics. Directors get involved when changes in institutional policies affecting SSS participants, such as changes in admissions or financial aid, are proposed or implemented. They work out the agreements on referrals to other service providers, for example, or requests for greater assistance from faculty who request tutors or SI instructors. There were two projects, however, where the director delivered services along with the rest of the staff. One of these projects showed the greatest hours of contact per participant in this study, and a rate of contact almost twice as great as the next highest project among the five (although these rates can hardly be the result of the direct service provided by the project director).[26] It is worth describing the role of this project director because it provides some important lessons on how SSS services could be expanded.

The Aim High project delivers far more service per freshman participant than any other project in the study, with a median of 53 contacts and 45.8 hours of service per participant. In part, this accomplishment results from the project staff using most of the techniques already described. Aim High has a relatively large professional staff, most of whom are employed on the project less than full time but who are full time (or nearly full time) at the institution. Aim High project staff deliver most services to groups, not only instructional services but also general advising. The project limits intensive one-on-one services to the intrusive advising used primarily by the special-admit EOP students who constitute about a third of the participants, and to the office and additional hours during which instructors help students with assignments. Because most of the

[26] Because the data collection on services did not extend to the summer months, it is likely that the full contact hours for The Bridge were not captured in the data.

staff are on campus all day, they are able to meet informally with students who drop by as well.

The director plays an important role in maximizing service. He has hired staff members with subject matter competence in the fields they teach and has encouraged them to pursue professional development in their fields. Advising is everyone's responsibility; there are no full-time advisors. The director carries the same advising load as other staff members, conducts group advising, and also leads study groups. Responsibilities for administrative tasks are parceled out among the staff and are sometimes incorporated into instruction. For example, one of the English teachers has a developmental reading course that produces the SSS Newsletter as part of its curriculum. Staff development time is limited and highly targeted, devoted to finding out about the latest trends in instruction and developmental education in each field of instruction. Finally, the project keeps track of time; at the end of each semester the director knows how much service each participant received as well as average amounts of service overall and by type of service.

...at the end of each semester the director knows how much service each participant received as well as average amounts of service overall and by type of service.

Keeping track of service delivery. Most of these projects keep track of service delivery on an ongoing basis, but staff ability to know detailed information about each student's current attendance pattern or to generate aggregate records on service delivery differs a great deal. Only one project currently has an on-demand computerized tracking system that allows all staff to know which services each participant is attending *and* the student's current attendance pattern. This system can also generates aggregate project-level reports on service participation rates. One additional project has enough data entered in its computer system to know how much service it provides, by student, by service category, and by staff member. The data are not entered and maintained by the project staff on an ongoing basis, however, and certain informal forms of service fall outside the system. As a result, the staff does not know how much service it has provided to each participant until the year ends. The other projects maintain hard-copy participation files, although only one of the three maintains service attendance records, by student, on an ongoing basis.[27]

PCs and university computerized records systems are heavily utilized for other purposes, however. All the projects use computers to maintain student background data files (e.g., eligibility data). Most project staffs also use computers for e-mail messages among themselves and between the project, other

[27] All projects maintain hard-copy files on service attendance data by staff member, so the data on student attendance could be measured.

service providers, and faculty. These e-mail messages alert staff to student participation problems, but their use is not universal, relying on the good will of staff, faculty, and other providers. Almost all the projects consult the college or university computer system extensively to find out which courses students have completed, but not all the projects have online access to current course and grade data for their students. Projects without access to current course information have to request that institutional officials create printouts, creating sizable time lags.

Service intensity and cost. Although they deliver more service than average, these projects have budgets that are similar to those of average SSS projects. As can be seen in appendix B, the per-participant funds for most of these projects do not differ greatly with the funds available to most projects. The National Study of SSS found that the typical project received $867 in federal funds in 1995-96, and the survey of project directors conducted in 1991-92 showed that the typical project received 14 percent of its funds from institutional sources (excluding facilities). Using these data, one can estimate that the typical SSS project would have approximately $988 to spend per participant in 1995-96. Two projects in this study spent less than $988 per participant, and one spent considerably more than $1,088. Two projects were within $100 on either side of the average. Three projects in this study received no additional funds from their institutions, although the lowest spending project among the three received a sizable in-kind contribution from the institution. Overall, then, these projects appear to have operating budgets that fall within a range similar to that of SSS projects as whole.

Although they deliver more service than average, these projects have budgets that are similar to those of average SSS projects.

IV. Student Targeting and Motivation to Participate in SSS

Part of the reason that some projects deliver more service than others is that students are simply more engaged. They show up for service more often and more consistently.

Part of the reason that some projects deliver more service than others is that students are simply more engaged. They show up for service more often and more consistently. As noted at the outset of this report, SSS project staff often express frustration about their ability to keep students engaged in project activities. They have tried various incentive strategies (mostly "carrots" but also a few "sticks") to entice continued participation. The projects in this study reflect two approaches to motivating students. They use various specific incentives. They also effectively convey the belief, and the evidence, that if the student puts in the time and effort, the project staff and services will enable them to attain success in college.

One strategy that appears to be of limited usefulness, even among this group of projects, is a contract. In a typical contract, the student agrees to attend advising or tutoring sessions; if he or she fails to attend, the contract usually states that he or she will (or may) be terminated from the project. These contracts are rarely, if ever, enforced. First, projects are in the business of delivering services, not turning people away. Second, projects that fail to retain students jeopardize their own futures, so they hardly want to show that students have dropped out. And there is always the hope that a student who has been having difficulty will turn himself or herself around and use services again. That, after all, is part of the overall goal of the SSS program.

The projects in this study do seem to have had more than average success in attracting and retaining students, so it is worth looking at how they do it. Most appear to use selection procedures to motivate students, combined with additional incentives to participate. No project does all of the activities described here, and not all approaches are powerful, but the activities do seem to make a difference. Elements seen in these five projects include the following:

- The admissions procedures themselves require students to demonstrate motivation (for the two projects that help select special-admit students from among applicants who do not meet regular admissions requests).
- Projects exercise control over continued enrollment, and have a demonstrated willingness to *exercise* that control to retain, suspend, and reinstate students (for the three projects that enroll students who do not meet regular admissions requirements).
- Projects offer rewards for consistently attending services—especially grading policies, employment, and recognition.
- Projects offer limited rewards for academic achievement—recognition, project employment, and limited additional financial aid.
- Projects seek to remove barriers to attending services—through flexible scheduling, very limited day care (or referrals), and short-term (and small-scale) financial assistance.
- Projects intervene with faculty and institutional officials, especially during registration or when a crisis occurs.

How projects attract and motivate students. Projects that play a role in college application review for all or some of their participants (such as The Community and Aim High) have the advantage of being able to test the motivation of possible

participants. They have devised various methods of discerning the motivation of applicants who do not qualify for regular admission, including requiring additional achievement and/or aptitude testing, or requiring written essays on why the students want to attend the college and other subjects. In addition, potential admittees are invited to oral interviews where a further judgment about their willingness to put effort into college and the project can be judged. Staff of Aim High say that the willingness to carry out the steps necessary to be considered for special admission is usually a pretty good indicator of who will be motivated to continue. Unless the testing shows very low academic skills, taking the test is usually sufficient for the project to recommend acceptance. Staff of The Community put stock in the quality and length of applicant essays. In The Bridge, university officials have prescreened and selected project participants from among applicants who do not meet regular admissions requirements.

Projects without the ability to review college applications can still make some project enrollment choices that help to ensure an interested clientele. For example, most of these projects enroll full-time students as participants although it is not always an official policy. National longitudinal studies of youth report that students who begin their college studies on a full-time basis are generally more likely to complete college. Students in Project Surpass are enrolled in the project automatically when they enroll at the institution and are assigned to developmental courses. Since the project provides the labs for those courses, the fit between project services and institutional requirements is close.[28]

The Bridge and Aim High maintain a great deal of control over the continued institutional participation of special admission students (students who do not meet regular admissions criteria). In The Bridge, the residential summer program sets the pattern for institutional and project participation. Participants are on-campus "captives" and learn to show up for classes and services, but failure to continue a solid pattern of attendance in advising and/or instruction in the freshman year can lead (and has led) to dismissal from the institution. Aim High special-admit participants who do not show up for advising or SSS classes and labs have also been dismissed on occasion. Instructors in both Aim High and The Community are expected to take attendance at each class or SI session and to report attendance to the project.

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[28] This relationship is possible because nearly all students in developmental courses already meet SSS eligibility criteria.

These projects do not just exercise negative sanctions, they also help students stay in school. They are able to keep students who have fallen behind academically off probation for a semester, and they can also recommend that students who have been suspended be reinstated and given another chance. Participants know that the projects can exercise both positive and negative control. Most projects will intervene to try and head off an F grade for a conscientious participant, if at all possible. Projects that can intervene effectively on educational continuation seem to provide a comfort level for students that makes active participation seem worthwhile.

Participants know that the projects can exercise both positive and negative control.

Projects have also devised rewards aimed at keeping participants engaged. Whenever possible, these projects have tried to provide participants with employment tied to project activities. The Community uses active or past SSS participants as tutors and instructors in its Upward Bound project. It also employs clerical staff from among participants whenever possible (directly or through work/study), and has helped participants to gain positions as peer advisors in the university. It has arranged internships and externships for participants with nonprofit organizations and government agencies. Several projects use SSS participants (and former participants) as peer tutors in the SSS project itself.

The one project among the five with no *a priori* institutional "filters" on its participants, (i.e., it does not focus on special admits or on specific subgroups such as students in developmental courses) has devised the most unusual incentive policy. Students who participate in Project Support's course tutoring are guaranteed that they will not fail that course as long as they continue in tutoring. Project Support is also the only project among the five to use the most common approach to recruitment and service delivery among SSS projects as a whole. It advertises its tutoring services widely on campus and enrolls all participants who meet the federal eligibility requirements (i.e., it does not focus on a particular subgroup of students at the institution). In general, projects that use this approach tend to report difficulties in retaining participants, yet Project Success appears to have a solid track record in terms of median contacts per participant per year (i.e., it provides more contact than the national average). Project staff believes that the "nonpunitive" grading policy, as it is called, plays an important role in maintaining participation levels. It should also be noted, however, that Project Success is the smallest project in number of participants in this study, and it spends considerably more dollars per participant than the other projects. It may well be the case that this project can devote more staff time to keeping track of participation than can most projects, following up with students who fail to show up for services.

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These projects also carry out many recognition activities. They hold banquets to give awards and publish stories about successful participants. They encourage participants to apply for institutional recognition and occasionally lobby a bit to get institutional recognition for participants. The projects in this group have had limited success with gaining additional financial aid for participants who perform well, but even token additional gift aid can have a motivational impact. One project provides developmental courses for SSS participants, while all other students must pay for developmental courses over and above tuition, on a fee-recovery basis.[29]

Equally important, these projects try to reduce the barriers that make it difficult for participants to keep coming back.

Equally important, these projects try to reduce the barriers that make it difficult for participants to keep coming back. For this population, whose links to education are often problematic, a seemingly minor obstacle can throw a major wrench into study plans unless someone steps in to help. These projects try to schedule activities that will fit the time schedules of students who have children or who leave campus to work for a portion of each day. They set up small loan funds, with staff contributions, to help students who face temporary financial crises like a broken car or not enough money to buy books. They find rides for students when a city bus strike makes it impossible to get to school. They hold *ad hoc* review sessions before exams and arrange for someone to take care of small children while parents study. They listen when students talk about spouses who feel threatened by their college going. They send birthday cards, and they phone and send notes when students are missing. These are the small gestures that students remembered and spoke about when we met with them.

Project staff act as advocates for participants at important times, when the lack of an advocate can mean the end of an educational career.

Students also spoke about more significant staff interventions. Project staff act as advocates for participants at important times, when the lack of an advocate can mean the end of an educational career. Project staff have intervened to stop suspensions for students who have fallen on hard times but who continue to show promise. They have lobbied financial aid offices to find additional funds for students who applied too late. Students do not forget these demonstrations of faith and they have spurred many to rise to the challenge and apply themselves, once and for all. Several students said that staff members had more confidence in them than they had in themselves. They stayed in school and in the project because they did not want to disappoint the staff member who had worked so hard on their behalf.

[29] SSS rules require that SSS offer such courses at no cost.

Rethinking the motivation issue. In SSS, the motivation issue is usually framed as "How can we keep students coming back for service?" The ways in which these five projects address motivation suggests that an equally important question is, How can an SSS project become a central element in the student's educational experience? With one exception, these projects either set the ground rules for college attendance or are linked directly with meeting educational requirements critical to college continuation. As we have seen, they play a role in admissions and they play a critical role in providing the courses, supplemental instruction, or labs students need to meet general or developmental requirements. These projects do not provide "supplemental" services, a term often used (unfortunately) to describe what SSS offers. Rather, some of these projects have become the main lens through which the participants view the institution. The staff are seen as guides through the maze of courses, requirements, financial assistance, and college rules. This way of defining the motivation issue puts the emphasis on the importance of the project in ensuring that students meet educational goals—a project that can offer students a route to meeting their educational objectives is likely to keep students coming.

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V. Staff Diversity and Directors with Strong Institutional Links

As the examples about intervention show, the staffs of these projects are dedicated and caring. When you ask participants, faculty, and administrators why the SSS projects at their institutions are successful, staff capabilities are always cited first. There is little doubt that caring staff are critical to a project's success, but what, if any, commonalities can we note about the staffs of these projects? In many ways, the staffs are quite different—some projects have staffs with extensive project tenure while other projects have had almost complete staff turnover in the past 4 or 5 years. With the exception of project directors, almost all the professional personnel in these projects are women, but their backgrounds range widely. There are sizable numbers of middle-aged professional staff members, some of whom have considerable experience teaching secondary education and others of whom have returned to work after years out of the labor force. There are also a fair number of younger persons with recent degrees in counseling and guidance or social work. They are white, African American, and Hispanic. The variation in background, education, and experience among the staffs of these successful projects suggests that there is no one optimal background for an SSS staff member.

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There is also little commonality in staff credentials and training. All professionals have at least a bachelor's degree, most in an education-related field. Many also have master's degrees, usually in a professional program rather than an academic subject. Beyond the education that staff bring to the job, most of these projects provide little formal training for professional staff. Projects appear to expect that professional staff have the necessary academic or counseling skills and that they will learn the specifics of the position on the job. One project holds a 2-day training period for professional staff each fall, but the emphasis is on college rules, job procedures, maintaining confidentiality, ethics, and the like. Counselors in this project also participate in institutional training for academic advisors. Several projects encourage staff to participate in local and regional branches of organizations, such as the National Association for Developmental Education, the Four C's, or the National Conference of Teachers of Math, where they are likely to learn about new approaches to instruction and services. The projects that employ peer tutors do provide a day or two of training on how to interact during a training session (e.g., never tell a student having difficulty with a math problem, "this problem is easy...") and new tutors sometimes shadow experienced tutors for some period of time.

All of these projects have directors who have been with TRIO or similar programs at the same institution for many years.

There is one important way in which these successful projects are alike, however. All of these projects have directors who have been with TRIO or similar programs at the same institution for many years. The current director of Project Support has been with TRIO at that campus for over 25 years. From 1980 to 1994, she was the director of Talent Search, and in 1994 she became the SSS director. The director of The Community attended the institution and has been with TRIO and similar projects at that institution since 1971, and he became the SSS director in 1990. The director of Project Surpass worked at the college from the late 1970s to the late 1980s, left briefly, and returned as SSS director in 1991. Aim High's director grew up in the community, attended the institution as an undergraduate, started working in the SSS project in 1984, and became the director in 1989. The director of The Bridge is probably the newest at her institution; she started as a counselor in the SSS project in 1990, and became the director in 1993.

The considerable tenure of the project directors plays an important role in linking the projects to their institutions. The project directors are known and widely respected by senior institutional officials even in the largest institutions. Although the institution may not contribute substantial additional dollar resources to the projects, the directors often play important roles in institutional policies affecting disadvantaged students. For example, the director of Aim High has been asked to take on

overall responsibility for coordinating support services at the institution. The director of The Community played a critical role in saving the institution's main program for admitting disadvantaged students this year. Because of the respect she commands, the director of Project Surpass has strengthened the project's relationships with key administrative offices and faculty over the past several years.

VI. SSS as Campus Safety Valve

When the study of best practices began, we hypothesized that more effective projects might well be located in institutions that were the most committed to disadvantaged students and/or gave the greatest financial support to their SSS projects. In fact, projects in this study are generally located in institutions with mixed sentiments about at-risk college students. Almost all of these institutions have tightened entrance requirements over the past several years and now deny entrance to some students that SSS would have served in the past. Further, only one of these projects receives more than an average level of institutional financial support. In two cases, the institution contributes only the standard in-kind physical space, desks, chairs, and telephones. Yet institutional officials interviewed for this study express admiration for the projects and appear to value them highly for the second chance the projects provide to participants. They see the staffs as dedicated and the projects as providing important services on campus. The project directors are highly respected.

At first glance, institutional officials at these colleges seemed to be expressing contradictory views. They indicated proudly that the institution has tightened or is in the process of tightening admissions requirements (or probation and dismissal rules) so that only "serious" students will be served. At the same time, however, they expressed admiration for the staff of the campus SSS project who work so well to help at-risk students succeed. At one school, senior officials indicated proudly that students without certain requisite high school courses and grades would no longer be allowed to enroll, then indicated that SSS participants who would not have met the new qualifications had received the last two Chancellor's Awards for exemplary performance and service. If they feel so positive about what disadvantaged students can accomplish, and such respect for SSS, why are these officials further restricting entrance?

There are several forces at work here. First, decisions on entrance requirements often come from sources outside the institution, especially state legislatures and governors.

Increasingly, public officials are seeking ways of cutting costs while improving completion rates. Increasing admissions standards and decreasing the availability of high-cost developmental offerings are viewed as means to those ends. Institutional officials may not have much say in designing these policies even if they appear generally supportive of their implementation. Second, much as respondents in surveys often express dissatisfaction with "the schools" as a whole but express pride in their neighborhood school, higher education officials like the general notion of high standards at their institutions but also express admiration for students who have overcome educational and economic adversity to succeed. Even though they want to say that their institution is selective (to some extent), officials want to retain an avenue to demonstrate that the institution is capable of offering a second chance to those with the willingness to work hard. There are also probably some officials who simply disagree with institutional policy but are charged, nonetheless, with carrying it out.

As a result, the SSS project gains prominence as the face of the institution's altruistic instincts. It may not receive sizable institutional resources, but it does gain visibility and a clear raison d'être, from its position as the institution's vehicle for inclusion. In other words, the SSS projects provide a safety valve, allowing the institution to continue to accept some students who are at risk while retaining confidence that these students will not depress institutional completion rates. The projects are seen as offering instruction and services that enhance performance rather than increasing the costs associated with poorly prepared students. The visibility and legitimacy that the SSS project gains in turn helps the project staff participate actively in policies affecting disadvantaged students. For example, when one institution suddenly changed the rules for financial aid, effectively cutting grants for some of the most needy students by several hundred dollars a year, the SSS director was able to get a quick hearing from senior officials and a reversal of the policy. At another institution, SSS was able to obtain more favorable conditions for tutoring and other institutional services for its participants because it provides the institution with the means to offer special admissions. These may not seem like major items but, compared to the marginal status of SSS projects at some schools, these projects appear to be well integrated into overall institutional policy and programs.

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THE DYNAMICS OF SERVICE DELIVERY

Beyond commonalities of overall approach, projects engage in specific practices to deliver services. This section of the report describes some of the outstanding instructional and service approaches used by the sites in the study. The features of service delivery described here include group learning, active counseling, and services integration. As we noted in the discussion of commonalities, there is no guarantee that these are effective practices, but when we asked the project staffs and institutional officials to point to the elements they considered the most important, these are features they (and we) noted.

I. Group Learning

Group learning as a means of delivering academic service and achieving efficiency has already been discussed, but it is, first and foremost, an important way to learn. There are three main types of group learning in these sites—course instruction, supplemental instruction, and group tutoring. This section of the report examines how group learning operates by describing sessions observed as part of this study, focusing especially on what takes place in these settings and what the findings from these sites tell us about effective ways of delivering these services.

Most SSS **course instruction** in these sites is developmental, devoted to enabling participants to enhance basic skills needed to complete college-level work. SSS-sponsored courses are offered in areas as diverse as reading and writing, basic algebra, and study skills, but the dynamics of the courses are similar. Several features typify SSS courses in these sites, including a lecture format punctuated by some small-group discussions, small class size, patient instructors, and a strong message that diligence is what matters—if you put in the effort, you will be successful in the course. Class sessions often present opportunities for noninstructional assistance as well. They are a means to impart information about requirements and deadlines. Following are descriptions of two classes we observed in one of the sites:

> ***Several features typify SSS courses in these sites, including a lecture format punctuated by some small-group discussions, small class size, patient instructors, and a strong message that diligence is what matters—if you put in the effort, you will be successful in the course.***

> **Academic uses of the computer**. The session was the first meeting of a new elective class aimed at learning how to use the college computer system. Class will be held 2 hours a week for 7 weeks (half a semester). Susan has been an SSS instructor for almost 10 years and

loves to invent new courses. She sees a need and tries to fill it. She has learned that if she titles the course "Academic Uses of ...," it will usually be adopted. She also teaches a writing course as well as a reading and writing course for ESL students. In the computer course, Susan plans to provide 1 hour of group explanation on computer use and an hour circulating to work with individual students who are practicing the new skills. The class is held in a classroom loaded with computers, attached to the college computer center. This is the fourth time that Susan has offered this class this year.

The group consists of four students, three women, and one man. Susan indicates that two additional students will probably join the class at the next session. (One of those students caught up with Susan on the way to class to say that she had a day care emergency and had to leave campus early to pick up her son.) Susan passes out a sheet that explains the purpose of the class and what will happen at each session. The sheet also explains the texts and other materials students will need. She reviews the materials that are needed with the class.

Susan has an informal and engaging style. Even though it is the first class, she seems to know many of the students and refers to each by name. The approach is largely lecture and Susan makes extensive use of the chalk board to emphasize key points—how to use your name as a password, how to log on, how to use the mouse, etc. She tries to put students at ease by indicating that she, too, is a novice at using the university computer system. She does, however, assume a certain minimum level of capability with a computer (although not with accessing the university system). By the end of the formal part of the class, most of the students have logged onto the system. Some have also accessed the student advising system, although one or two are considerably more adept than the others at moving through the data.

College writing. Lisa has been an SSS instructor for over 15 years and loves to challenge students to think about what they read. She teaches a student success seminar for SSS, as well as developmental courses for the university. She starts this class by informing students about an upcoming SSS career workshop. The workshop has been scheduled for 2-4 p.m. and a number of students point out that they have work or class conflicts. Lisa urges them to attend if at all possible and

points out the benefits of networking. "The more people you know, the more opportunities you have." She then takes attendance. There are 15 students in the class, 12 women and three men.

The students have read a short article by William F. Buckley for the session. None of the students know who he is. Lisa describes him briefly and says, "You can just picture him being the snob he appears to be in this article." She then goes on to point out the aim of the story, "If you want to get someone to your way of thinking, you tell a story." That is what Buckley does in the article. She asks students to try to generalize, to describe the main point that Buckley is trying to make. No one responds. She then calls on a student who first responds by saying, "I don't know." A second student decides to take a stab at it, and the instructor takes the response and expands on it to make the general point.

Lisa then breaks the class into writing groups of two or three students for 15 minutes. Each group is instructed to read aloud a short essay that she hands out. Lisa writes questions on the board about the essay aimed at teasing out the key points, and the students answer them. The theme is alcoholism and whether women who are alcoholics should have babies. The last 10 minutes of the class are devoted to answering the questions and the discussion is lively, although it steers clear of potential controversy. Throughout, Lisa uses a dynamic question and answer lecture format.

In conversation, both of these instructors talked about the limited previous experience of many SSS participants. They also stressed that students have not been taught to read material for comprehension. They try to get the students to reflect critically on what they read, which is sometimes a difficult task. Both of the instructors have been public school teachers, and both see themselves as having a good idea of the students' previous educational experiences. They try to bridge high school and college in their approach to teaching SSS participants, which is reflected in the format of the courses. In addition, the SSS instructors take extra time with each student (e.g., Lisa holds at least three 15-minute sessions with each writing student out of class to work on assignments) and provide a level of moral support not found in other developmental courses.

SI gives students a chance to review the lectures, ask questions, hear expanded explanation of concepts, review homework, get a head start on materials for future classes, and prepare for exams and term papers.

Supplemental instruction is provided exclusively by SSS in the two sites where it is offered.[30] SI is additional instructional hours led by SSS staff and attached to popular freshman courses that SSS participants have been encouraged to take. In one site, SI is offered for credit (toward full-time status); in the other site it contributes to the overall class grade but does not carry credit.[31] SI gives students a chance to review the lectures, ask questions, hear expanded explanation of concepts, review homework, get a head start on materials for future classes, and prepare for exams and term papers. In short, it reinforces the course content and provides a setting for students to study it more closely. In general, students are expected to attend all sessions, but not all instructors take roll at each meeting. Following is an example from each site.

> **Environmental science SI at Aim High:** Kathy is a former high school math teacher who has been teaching in SSS for 6 years. She starts the class by notifying the students of the upcoming career workshop, handing out information, and urging the students to sign up. There are 13 students, 9 women, and 4 men. The first activity is reviewing a practice quiz that Kathy hands out.
>
> Kathy does not wait for students to raise their hands. She calls on students to answer quiz items. She will let willing students answer questions, but if one student is monopolizing the responses she will call on others who demonstrate some willingness to contribute. Throughout the discussion she takes opportunities to mention test-taking skills along with the substantive answers. Some of the test-taking information she imparts along the way includes the following advice.
>
> - When you assess an item, watch out for "all of the above" answers in multiple-choice items.
> - You may have to convert a fraction to a decimal to come up with the right answer (she reviews how to do this).
> - You may have to read a chart or graph (she reviews how to do this).
>
> She explains key concepts on the test as they arise. She also points out that practice quizzes are good because they force students to study ahead of time.

[30] Project Surpass is considering shifting to supplemental instruction in the future.

[31] It has been offered for credit in the past, and the site may return to this approach next year.

Kathy did not attend the last course lecture because the professor had announced previously that he would be showing a movie and she has already seen it several times. However, it turns out that he did not show the movie and lectured instead, so the students are now ahead of where she thought they would be today. It is a function of how many times she has attended the lectures that this realization only bothers Kathy for a moment. She asks the students to tell her what information was discussed in general terms and then proceeds to review the lecture using her notes from the previous year. Concepts she reviews include cold front, warm front, and convection currents.

Kathy reiterates information in the lecture and adds key information where necessary. She stresses that it is not necessary to memorize certain details. She makes a point of not adding any concepts that were not in the class discussion because it might be confusing to the students. She stresses that it is important to stay focused on what the professor wants. She does relate science concepts to current political issues in the state, however, to show students their importance.

There is an upcoming midterm, and Kathy stresses that there will be a vast amount of information on the test. She reviews the main topic headings that will be included or likely to be included, and urges students to "go way back" in their notes to study for the test. She also urges students to drop by her office if they have additional questions. This is a dynamic session with lots of teacher-student interaction, although it is largely a lecture format. At the end of class, many students come up to make private appointments for additional help.

World history SI at The Community. Judy takes attendance and then reminds the students that there is a course homework assignment due on Friday. She also reminds them that they should have read Chapter 27 for today. Judy is a lawyer who practiced for 6 years and taught law courses. She has returned, temporarily, to college teaching, and is planning a career in college administration. The class has eight men and three women.

Judy hands out a three-page set of questions drawn from the text of Chapter 27 with spaces for students to write their answers. First she goes quickly through the questions, pointing out which items can be answered only from the text and which have been (or will be) covered in the lectures. Then the class proceeds to answer the

questions together. Their answers are brief and Judy expands and clarifies information. For example, how did the Nazis start out as socialists but become fascists? She tells the students that they need to be familiar with broad groups of Germans (business, youth, etc.), but need not memorize details about each group.

As the students review their class notes and homework, Judy points up important items. For example, she tells the class that they will need to know the important battles of WWII. She creates three headings on the board—the U.S., the Soviet Union, and Great Britain—and has the class indicate what each country wanted at the end of WWII. Right answers are written on the board and wrong answers are used as a jumping off point to elicit right answers. Judy indicates that some answers are correct but of lesser importance. She also indicates items that do not have to be studied for the upcoming exam.

She reminds students to read Chapter 28 and cautions them that they will need to review certain items in that chapter that will not be addressed in the lecture but are likely to be included on an exam. At the next SI session she will give the students a pretest quiz (true/false) to help them prepare for the exam. The following SI session will be devoted to how to deal with essay exams.

SI may be taught in a traditional manner—i.e., it is usually a lecture—but it provides SSS participants with critical study tools.

SI may be taught in a traditional manner—i.e., it is usually a lecture—but it provides SSS participants with critical study tools. The classes reinforce the information in lectures (the students hear it all twice, if nothing else). In addition, the instructors teach the participants how to study—how to discern important from unimportant information when reading, how to spend their limited study time before exams. Homework and practice quizzes force students to stay on top of material rather than cramming for exams. Students also learn how to take notes effectively as SI instructors ask them questions about the lectures and provide them with outlines to fill in. Not surprisingly, the student focus groups in both of the projects offering SI cited it as the SSS service they most appreciated. And the professors for the courses in which SI is offered have nothing but praise for the SI instructors and classes. In one of the sites, the SI leader has taught the course in the professor's absence.[32]

[32] In addition to SI, one of the sites provides computer-assisted instructional labs in conjunction with developmental courses. These labs reflect a course reinforcement idea similar to SI. The labs are self-paced and students in the courses are required to attend for about three 50-minute sessions a week. Students review materials organized into units (such as "whole number subtraction" or "fraction multiplication"), pass a computer-generated test, and then pass a test provided by the teacher. Supervisors are on hand in the labs to answer questions and explain concepts when students need assistance.

Study groups are informal groups of students with a leader (usually called a group tutor) that are organized around a particular course. Leaders may be peers (usually upper division students) or professionals (i.e., persons with at least a bachelor's degree). Only one of the sites, Aim High, offers study groups. Those groups usually meet once or twice a week and may meet more often before exams. Attendance is voluntary.

> **Introduction to human biology study group**. Normally this study group meets once a week, but the students asked for this additional session to prepare for an upcoming midterm. The group consists of six women and the leader, Bob, who is also the director of the SSS project. The group is seated around a small table. The discussion is fast paced as Bob reviews items likely be included on the test, asking students questions to elicit whether they are prepared. He reviews key concepts and tries to show what information is important to remember and what is not. He urges the students not to get lost in the details, and suggests that certain types of information probably will not be asked on the test.
>
> The students seem quite concerned that they may not be sufficiently prepared, but they seem to know most of the definitions and concepts. Bob keeps telling the students that they are worried about memorizing more detail than they will need, and he urges them to focus on general types of hormones, not highly specific types.
>
> In preparation for this review session, Bob asked the students to make a table of hormones and he supplied the topic headings. They review the results. With respect to evolution, a student asks whether they will need to know tooth size. He says that what will likely be asked is the timing of development—i.e., in general tooth size gets larger over time, Darwin's argument, etc.
>
> A student asks about the nervous system and this prompts Bob to ask whether the students feel confident about all systems of the body. He explains certain disparities between the book and the lectures on the organization of the nervous system but then stresses again what is most important to remember. He reviews the brain and notes certain items that were not included in the lecture but that students should know for the test.
>
> Bob then reads aloud a set of sample multiple-choice questions that the students answer aloud. He reviews why certain answers are or are not correct and reiterates the importance of general information. He also tells them to watch out for multiple-choice questions that include the

response "more than one of the above," where regular test-taking strategies will not work. He also suggests eliminating some choices rather than selecting one right away. He tells the students to visualize certain numbers that they read in shorthand (e.g., remember that the response: "3.5 million" is actually 3,500,000) in selecting their responses. He tries to show students how to answer multiple-choice test items without hearing the response choices.

The session is informal in interaction but structured to prepare the students for the exam. Bob creates a climate that instills the students with confidence that they can pass the test. They leave expressing more confidence than when they entered.

Intermediate algebra/trig study group. This study group is akin to a tutoring session. For the first several minutes, only one tutee is present. The study group leader, Andrea, who is an upper division student, works with him on specific homework problems for the class. She explains each problem before she begins to work on it, trying to get the student to estimate the likely answer as well as discard answers that could not possibly be true. She then reviews a practice test in the text with him.

About 10 minutes into the session a second student arrives. The second student shows Andrea the work she has already completed. Andrea corrects the work, pointing out errors and explaining why they are errors. The second student wants Andrea to reveal items on the forthcoming course test in advance, which Andrea refuses to do. She says she will provide the students with similar problems to those likely to be on the test. The second student then begins to work on the same problems as the first student.

This is a quiet, informal session, with lots of teacher feedback as the two students work at their own pace. The second student does not appear to need a lot of help. Essentially, the leader is conducting two one-on-one tutoring sessions simultaneously. As the leader is also a student, she seems to relate quite well to the students receiving the tutoring, and she stresses that she was in the same position not long ago. The second student is also an SSS peer tutor for an introductory math course, and Andrea and the student have a short discussion about issues in helping students.

The group learning offered by SSS is neither magical nor different from other instruction. What sets SSS group learning apart is that it is low key and supportive in an environment in which students are often nervous and fearful. SSS instructors and group leaders understand that many students have had limited experience, that their previous formal education was not always a positive experience, and that they need to develop skills that professors assume students already possess (such as the ability to read critically or do simple math without errors). Instructors and tutors try to put students at their ease, teach them the basics, get them to keep abreast of class work and study consistently, and prepare them for the exams and papers that will determine their grades. Most important, they convey to the students a firm belief that hard work will lead to earning college degrees, no matter the level of the students' initial skills.

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II. Active Counseling

All but one of the sites included in this study conduct an intensive counseling component for freshman participants that is often called intrusive advising. As practiced in these sites, intrusive advising includes several components beyond typical advising on courses and requirements:

- **Multiple meetings with students during a semester**—typically three meetings, one at the beginning of the semester, a midterm review to discuss class performance and actions students will take to improve performance, and a final session to undertake course selection for the next semester. There is considerable attention to completion of general education requirements, selection of major, etc.
- **Midterm evaluations by faculty**—SSS advisors receive systematic information from all instructors on the performance of participants. That information is relayed to the participants in midterm review meetings (or, sometimes, by mail if there are no problems).
- **Ongoing tracking of student performance by SSS advisors**—Faculty and SSS instructional staff keep SSS advisors abreast of any difficulties that occur (e.g., notifying advisors if a student fails to attend class repeatedly), usually by e-mail.

Support and advocacy for students as needed—Advisors may intervene with an instructor if a student is

having difficulty in class or is faced with a personal crisis. Some projects have small funds, set up with staff contributions, that advisors may use to assist students with short-term financial problems affecting their ability to study. Students are expected to repay the fund.

- **Referrals for non-SSS services**—Such services include tutoring, personal counseling, testing for learning disabilities, campus day care, etc.
- **Academic decisions**—In some instances, SSS advisers control course selection, dropping courses, probation, and reinstatement.

Most of the projects in this study do not advise students beyond the sophomore year...

Most of the projects in this study do not advise students beyond sophomore year, and some seek to shift students to regular advising (advising center or faculty) much earlier. In one special-admit project, for example, students are encouraged to make written academic plans that will enable them to shift to departmental advising by the time they have acquired 30 units with a C average. In another, students are encouraged to shift after 36 units, although theoretically they can stay until 90 credits. In most of these projects, SSS ceases to provide formal advisement by the end of the sophomore year, although many students come back for informal help. Here are descriptions of a few advising sessions:

> **Individual advising session**. Bob asks the freshman student how he thinks he is doing in his classes and, with some hesitation, the student says, "okay." Bob shows the student the faculty midterm reports the SSS project has received. In general, this student is doing fine and Bob reinforces the message of the faculty reports. The student asks what grade he needs in his current math course as a prerequisite for the next level math course and Bob answers the question. Even though this student is a freshman, Bob then points out that he has not yet declared a major and that it is important to do so soon, so that the student can decide on the sequence of math courses he intends to take.
>
> Bob gives the student detailed information on the requirements for a wide range of majors, including interdisciplinary majors. He also suggests to the student a range of careers that might result from each of the possible majors they discuss.
>
> **Individual advising session**. This student's progress at midterms is okay, so Susan works with her to select classes for next semester. They use the university computer system to select classes. They also check the

computer for the exact registration dates for the fall. This student wants to take a course called "Death and Dying," primarily because it can be taken during a 4-week intersession and can meet a difficult general education requirement. Susan suggests, in a friendly but firm manner, that the course will be quite difficult (loaded with upper division students) and very depressing. She tries to steer the student to an alternative course called "Personal Issues in Health," that should be less demanding.

The student also asks Susan's advice about whether she should apply to work in the freshman student orientation program. The student is concerned that preparing a 4-minute presentation and going to an interview will be quite time consuming. Susan encourages her to consider applying.

Individual advising session. The student has a pleasant demeanor, but her message is that she wants to select courses for next semester that are relatively easy. Her grades have not been particularly good and she is now facing surgery that will cause her to be out for a week. Kathy urges her to contact each professor before she leaves campus and make arrangements to take make-up exams. Kathy also tells the student to get a doctor's note in order to return and to make up missed work.

They then review the student's midterm grades which are not particularly good. A discussion ensues about how to improve poor grades. The student complains about a professor's style, and Kathy urges her to ignore the professor's quirks and, instead, focus on the work. Kathy suggests tutoring from the college tutoring center and the student asks the location of the tutoring lab. In general, Kathy is encouraging, assuring the student she can pull up her grades by the end of the semester but only if she makes a sizable effort.

After the student leaves, Kathy says that if a student has a particular major in mind she will be more directive than if they have not yet decided. She does not want students to waste time with courses that will not help them complete requirements. If students are less sure about majors, Kathy focuses on completing the general education requirements. The student who was just advised is leaning toward business administration, which is a competitive major. Kathy is concerned that she may not be able to enroll in that major with her current GPA. On Kathy's advice to help improve her GPA, the student is repeating a course for which she received a D last year.

Sometimes the process of advising one student can take enormous amounts of time. Linda, an advisor in one of the special-admit projects, reviewed with us the file of a second-semester freshman student whose difficulties have taken enormous amounts of Linda's time. During her first quarter, this student failed to show up for classes and take exams despite repeated urging from her advisor to attend to her schoolwork. The advisor thinks the problem was the freedom that the student was experiencing for the first time. The advisor knew about the student's progress through periodic e-mail messages from instructors. During the second quarter, the student again failed to show up for classes. When Linda tried to reach her she could not locate her at her dorm or at her parents' home. At the end of the second quarter, the student was placed on probation. At that point, the student finally started to attend meetings with Linda to discuss ways of making up work and improving her GPA. As the year is ending, the student finally appears to be shaping up, attending class, and passing exams. Linda is hopeful that the student is now on the right track, but it has taken many hours of staff time for meetings and follow-up to reach this point.

To lighten the advising load a bit, some of the projects use group advising for routine matters.

To lighten the advising load a bit, some of the projects use group advising for routine matters. One project brings students together in relatively large groups (30 students), while another schedules a series of small group sessions. These sessions are particularly useful for delivering general information, much of which students have heard before (e.g., during freshman orientation) but may have forgotten. Group sessions are also used to select courses. Advisors point out that students usually do not pay much attention to information on requirements until they really need to know the information.

> **Large group advising session at Aim High**. About 30 continuing SSS participants attended this session, which is one of several planned so that all project participants will get a head start on fall enrollment. Susan began by advising students that they need to become acquainted with various data sources, including the library and the Internet. Bob then began the formal advising session by reviewing the general education requirements. He proceeded systematically through each of the key requirements, using handouts provided to the students. He stressed some important rules: individual courses cannot count for more than one requirement (with one exception), but courses can be counted for general requirements and the major or minor. He stressed that students need to keep track of their progress and that requirements may differ for students who entered

the institution earlier or who are pursuing particular majors.

Susan then provided a demonstration of the new computerized advising system that has been adopted by the college. She rigged up a computer screen to an overhead projector and went through several screens to show students how to access the system and then how to use it. After the demonstration, students turned to computers in the room and tried to do the exercise themselves. Susan and Bob circulated among the students, providing individual assistance.

Small group advising session at The Community. Three continuing students attended this session, which was led by Linda and Karen. Each student received a printout of his or her educational status, including credits earned, requirements fulfilled, etc. Students also received a packet of general materials including the fall class schedule for SSS supplemental instruction classes, a list of student responsibilities and registration tips, information on the GPAs they will need to pursue particular majors, a list of upcoming registration deadlines, an example of a transfer plan each will need to complete in order to move into the regular college advising program, and a blank plan.

The advisors reviewed basic information on general requirements, which differ depending on the student's high school courses and entrance exams, general education course requirements, and graduation requirements. They also made some recommendations about where to get help in selecting majors. One student asked how long he could use SSS advisors and Karen told him he could use them as long as he wanted, but "we'll stop being useful" when you have selected a major.

The advisors discussed some popular majors that do not require high GPAs and urged students to inquire further. The students then began to fill out their own transfer plans. The advisors circulated to help them and answer questions. A lot of the questions had to do with the difficulty of particular courses. One advisor said, "We do not recommend taking a math course and a science course at the same time; it's too hard."

The message that students hear, repeatedly, is that they must take active control of their educational programs. They need to know the rules inside out and plan, plan, plan.

In short, the amount of time spent on advising in these SSS projects is considerably greater than what typical freshmen receive.[33] It also appears to be greater than average among SSS projects as a whole. Intensity is a function not only of a wide range of advising activities, but also of the time spent with students. Some of the time is individual sessions and some is group sessions, but the idea is to maintain lots of contact. The message that students hear, repeatedly, is that they must take active control of their educational programs. They need to know the rules inside out and plan, plan, plan. They need to take the courses that meet graduation requirements and steer clear of courses that are perceived as unduly difficult. They should declare majors early so that they know exactly what courses will be needed to graduate. Time (and credits) should not be wasted.

III. Integrated Services

SSS and other service providers often describe their offerings as integrated services or, from another perspective, they describe their approach as holistic. As was noted at the outset, the National Study of SSS found that a combination of cognitive services (such as instruction and peer tutoring) and affective services (such as cultural events and workshops) seemed to account for most of the positive effects of SSS. The current SSS legislation tries to encourage coordination of SSS services with other providers at the same campuses. In short, there is considerable interest in ways of melding services to better serve at-risk students.

This process of setting up a mix of services for each participant based on his or her educational status and needs is often defined as "holistic" services.

What is integrated service? The projects in this study all provide a mix of services to participants. As already described, three of the projects start with a targeted group of students, drawn largely or entirely from persons who do not meet the standard admissions criteria. The other two projects draw from the general student body, although the services that are likely to attract participants (labs for developmental courses and tutoring) appeal to students who may need additional assistance as well. Once enrolled in their projects, staff in all five sites work with the students to determine what additional assistance they may need. Students are encouraged to enroll in particular

[33] For a discussion of typical services see Cahalan and Muraskin, op. cit., Chapter 7.

courses, they get continual advice from counselors, they are referred to additional services as needed, and their progress is tracked. This process of setting up a mix of services for each participant based on his or her educational status and needs is often defined as "holistic" services.

In addition to the integration that comes from holistic services, there is another way in which two of these SSS projects integrate services (or relate them to one another): Aim High and Project Surpass integrate staff across the project offerings. In other words, the same people who teach the SI or supervise the labs also provide the student advising. They sometimes provide the tutoring as well.[34] This lack of staff differentiation has important effects. First, staff simply see participants more often. In addition, the participants see the advising staff as instructors as well, and instruction typically carries higher status at institutions, enhancing staff credibility. A student may come to an instructor for help with a term paper or an exam and also get important advice on next semester's course offerings. In addition, this approach makes efficient use of staff time. In one project, students do not have to wait to see an advisor. They just come up to the teacher after class and ask their questions or relate their problems, get responses, and, if necessary, make appointments for further assistance.

[Two projects] integrate staff across the project offerings...A student may come to an instructor for help with a term paper or an exam and also get important advice on next semester's course offerings.

The Community provides another form of integration, unique among these projects. It integrates its SSS staff and participants with those of the other TRIO projects at the institution. Part-time SSS staff also instruct in the Upward Bound project, and SSS participants serve as Upward Bound peer tutors and counselors. These relationships provide continuity among the projects and maximize staff time and student contacts. The work also provides SSS participants with small financial incentives. The institution's McNair project makes a special effort to encourage SSS "graduates" to participate in the McNair project. Joint activities among the three projects provide opportunities for participants at each level to share experiences, and the SSS participants serve as role models for the Upward Bound students. An SSS Advisory Committee, composed of students, plans events for the SSS participants as well as for the broader TRIO community.

[Integration of] SSS staff and participants with those of other TRIO projects at the institution...provides continuity among the projects and maximizes staff time and student contacts.

[34] A third project has some overlap—one advisor is also an instructor—but, in general, the staff is differentiated.

Chapter 3 Summary and Discussion

This study has addressed a wide range of practice and has drawn several key conclusions about best practices in SSS. First, the report summarized data showing that SSS participation positively affects student outcomes, including grade point average and college retention. Nonetheless, many participants do not receive enough service to obtain more than modest effects from the program. In part, the problem is one of resources—the SSS program nationally provides sufficient resources for only a modest level of service per participant. In recent years, there has been increasing interest in improving SSS outcomes, including recommendations for enhanced performance assessment. This study is aimed at addressing one of the most important elements in program improvement, namely, identifying ways of enhancing service delivery.

The report then took a more detailed look at what is already known about effective SSS service delivery. The recent longitudinal study of SSS participants has identified peer tutoring, instructional courses, workshops, and cultural events as the services that appear to be most effective. In addition, projects that operate as a home base for students, trying to address a wide range of their needs, also appear to improve student outcomes. There are important cautions about these findings, however, including concerns that student motivation may play an important role in both using services and the outcomes of those services.

The discussion then turned to the five sites that have been studied in depth, based on evidence that they are particularly effective for participants. Among the features that these sites have in common are 1) a project-designed freshman year experience for participants in which SSS staff play a major role in students' course selection and instruction; 2) a strong focus on providing academic services directly, including developmental and other courses, supplemental instruction, labs, and tutoring; 3) higher than average levels of student contact, made possible by group services, efficient use of staff time, and project directors who manage well; 4) student targeting and incentives that help projects discern who is likely to be motivated and that keep students coming back; 5) dedicated staff and project directors with strong institutional links; and 6) an important

role for the SSS project on campus, that is, allowing an institution to accept at-risk students without the fear that they will depress institutional completion rates.

In addition, we described the operation of important SSS services through observations recorded at the study sites. These observations—of instruction, supplemental instruction, tutoring, and advising—allowed us to define the parameters of these activities as well as note some of their exemplary features. We also discussed what it means when services are said to be "integrated."

As we look at the findings of this study, we also need to consider how those findings relate to broader themes in service delivery and student retention. There are three areas in which these findings underscore other information on effective practices. These include the general literature on student integration and college retention, the growing literature on informal group instruction, and the movement toward changing the ways in which basic skills are taught in college. In concluding this report, we address each of these issues briefly.

Student integration and college retention. A number of researchers have found that noncognitive factors are equally important to, if not more important than, academic performance in college retention. In particular, Vincent Tinto's theoretical insights about student attrition showed that the greater the shared normative attitudes of students with those of peers and faculty, the greater the likelihood of academic integration and, hence, college retention. Studies of disadvantaged students have underscored the exceptional importance of institutional integration in college completion. Isolation from the academic and social experiences that foster integration increases the likelihood of withdrawal.

The staffs of most of the projects in this study have, consciously or unconsciously, adopted approaches that seek to enhance academic integration and institutional attachment.

The staffs of most of the projects in this study have, consciously or unconsciously, adopted approaches that seek to enhance academic integration and institutional attachment. The combination of a structured academic experience and a supportive home base at the project, where the student is surrounded by peers and professionals who share attitudes about the potential for success, would appear to be an excellent environment to foster institutional attachment. Participants are encouraged to join the educational mainstream by tackling the general requirements immediately, but they are buttressed through a wide range of academic and emotional support. Sometimes, these projects become participants' main focus of attachment at the school. Staff members at several projects said

that they often have to wean students to leave the projects after they complete the general or lower division requirements.[35]

Informal group learning. The theoretical basis for informal group learning may not be as extensive as the basis for institutional integration, but there is a growing body of empirical research supporting the efficacy of study groups and supplemental instruction. Informal group study among students who are academically at risk appears to enhance academic performance and retention. In a broader academic environment that is often impersonal and competitive, the group approach fosters success and community. Groups are sometimes organized by race/ethnicity, by subject area, by major, or by some other commonality. By their ongoing nature, participation in groups requires students to stay current with lectures and readings, as well as providing students with structure for exam preparation. Group membership provides pressure to attend to studies and contribute to the group.[36]

Informal group study among students who are academically at risk appears to enhance academic performance and retention.

As we have noted in the report, these projects appear to make considerably greater use of group instructional approaches than SSS projects as a whole. In these SSS projects, the groups may be somewhat more formally organized than in some other contexts, but the groups serve many of the same functions. SSS groups are organized by subject or course, although SSS participants also are likely to share important background and class characteristics. SSS staff often worry that participation in SSS services will stigmatize students, but the groups in this study provide critical academic assistance and send the message that everyone needs help and support to succeed.

Reform of developmental education. There is growing concern with the instruction underprepared college students receive to improve their skills and their educational chances. The movement for change is particularly strong in English, where remedial education that emphasizes disjointed instruction in the rules of grammar (e.g., a "unit" on pronouns or a "unit" on subject-verb agreement) is believed to be largely ineffective in improving performance. Critics argue that when instructors use this dreary approach with students who earlier failed to learn grammar, they almost guarantee that the students will continue to fail and eventually leave. Instead, the critics argue,

There is growing concern with the instruction under-prepared college students receive to improve their skills and their educational chances.

[35] Completion of general requirements is commonly the project exit point in this group of projects.

[36] For more information on supplemental instruction and study groups see, for example, D.H. Congos and N. Schoeps, "Does Supplemental Instruction Really Work and What is it Anyway?" *Studies in Higher Education* (18)2 (1993):165-172; and R.E. Fullilove and P.U. Treisman, "Mathematics Achievement Among African American Undergraduates at the University of California, Berkeley: An Evaluation of the Mathematics Workshop Program," *Journal of Negro Education* (59)3 (1990): 463-478.

English should be taught through reading and writing. Students need to learn to read critically, to identify key points and analyze what they read, not just to summarize. They need to write constantly, writing about their own experience as well as about broader topics they read about. Improving writing skills should go hand in hand with learning to read critically.[37]

This approach—of teaching basic skills through content and writing—is reflected in two of the projects in this study. It is particularly apparent in the English and in the math courses provided through SSS.

This approach—of teaching basic skills through content and writing—is reflected in two of the projects in this study. It is particularly apparent in the English and in the math courses provided through SSS. Instructors in the developmental English courses we observed focus the instruction on a set of readings designed to reflect populations and issues with which the students will identify as well as some that expand students' horizons. The readings are analyzed in class; students are encouraged to talk about what they have read and to move beyond synthesizing to reflect critically on the readings (not to be intimidated by the printed page, or take what they read at face value). The instructors point out how the authors use language to present their views and tell their stories. The students write every week, and the instructors read and comment on their writing.

[37] A good introduction to issues in developmental education and the educational experiences of disadvantaged students more generally is M. Rose, *Lives on the Boundary*, New York: Free Press and Penguin Books, 1989.

Appendix A

Project Characteristics, 1992 and 1996

Project Characteristics, 1992 and 1996

Institutional data	Project background data	Main services, 1992	Main services, 1996
Project Surpass: 2-year college, 1,300 students, 66 percent full time, 76 percent women	'92: 254 participants, 90 percent women, 58 percent minority. Full-time director, 3 full-time lab supervisors, 1 full-time transfer counselor, 10 part-time tutors '96: 243 participants, 90 percent women, 59 percent minority. Full-time director (same as '92), 2 full-time lab supervisors, 1 full-time transfer counselor, 1 half-time tutor coordinator (half time paid by college), 6 student and 2 graduate student tutors who range from 6 to 18 hours per week	1) CAI labs for developmental courses (90 in math, 45 in writing, 10 in English per semester); 2) peer tutoring (30 students during week); 3) transfer counseling just beginning; 4) limited other counseling (66 students per semester); 5) limited cultural enrichment (20 participants in year)	1) CAI labs for developmental courses, 50-minute sessions three times per week (26 students in two grammar skills labs, also three introductory math labs); 2) peer tutoring (48 students in spring sem.) usually twice a week; 3) transfer counseling, meetings, and trips (75 participants); 4) 6-8 workshops (e.g., note taking, test taking, math anxiety, budgeting, making As, transferring); 5) mentoring by SSS staff like advising but more intensive (as often as once a month)
The Bridge: 4-year and graduate university, 18,000 undergraduate students, 68 percent full time, 54 percent women	'92: 148 participants, 75 percent women, 90 percent minority. Full-time director, full-time counselor, 4 graduate student tutors, 2 part-time study skills instructors (summer) '96: 225 participants, 68 percent women, 98 percent minority. Full-time director (was SSS counselor in '92), 2 full-time counselors, 1 summer session tutor, portion of instructional costs for summer program.	1) 7-week residential summer program including study skills, academic remediation, other courses, tutoring, counseling, mentoring, (serves 100 a year, of whom 60 are SSS eligible); 2) advising/ counseling for participants with academic difficulties; 3) limited tutoring (when regular center not open)	1) 6-week residential summer program for 100 including enrollment in 8-10 credit hours in, at least, English, reading, and study skills (no math); seminars, and academic advising; 2) required intrusive advising for first-year students and others having difficulties (including midterm monitoring); 3) required seminars on university information primarily for first-year students (registration, financial aid, services (8 in summer, 6-7 per semester); 4) summer tutoring and priority at university tutoring center during year

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Institutional data	Project background data	Main services, 1992	Main services, 1996
Project Support: 4-year historically black college, 4,000 students, 74 percent full time, 59 percent women	'92: 150 participants, 63 percent women, 99 percent minority. Full-time director, full-time counselor, (full-time tutor coordinator position vacant) 8 part-time peer tutors '96: 150 participants, Full-time director (was school's Talent Search Director in '92), full-time counselor, full-time tutor coordinator, 8 part-time peer tutors (10-15 students per tutor, each at least 1 hour per week)	1) Peer tutoring, one-on-one and small groups in writing, math, sciences, business, economics, and languages. Usually 1 hour a week with regularly scheduled visits. Those in tutoring cannot fail course for which tutoring is provided (all participants; 2) small-group skills development sessions on using library, writing research papers, etc.; 3) academic, financial aid, career counseling on as-needed basis (most participants); 4) new: faculty and SSS staff mentoring (37 participants)	1) Peer tutoring: wide range of courses, minimum of 1 hour a week, regularly scheduled, usually one on one, those attending cannot fail course (130 participants currently); 2) academic, financial aid, and personal counseling--and assignment to tutoring, midterm assessment (often once a month and at least once a semester for all participants); 3) career exploration--2 fall workshops and 2 school visits per semester (20 participants per session on average); 4) faculty, staff, and peer mentoring (35 participants currently); 5) one-hour skill development sessions, 12 per year: personal development and academic skill development (10-15 participants per session)
Aim High: 4-year college, 4,000 FTE students, 80 percent full time, 63 percent women	'92: 325 participants, 63 percent women, 17 percent minority. Full-time director, 3 full-time instructional staff, 1 part-time instructor, 4 additional professional staff (less than full time on project, more time through college), 4 part-time peer tutors '96: 275 participants, 71 percent women, 18 percent minority. 75-percent-time director (same as '92), 75-percent-time associate director, full-time instructor, 3 additional professional staff (less than full time on project, more through college)	1) Intensive advising for special admits including orientation, control of registration, course selection, and disbursement of financial aid, multiple advising meetings, midterm evaluations (34 percent participated); 2) less intensive academic advising for other participants; 3) remedial reading course (12 percent participated); 4) multiple sections of two writing courses (38 percent participated); 5) remedial math courses (25 percent participated); 6) study skill labs (i.e., supplemental instruction) for four freshman courses (22 percent participated); 7) study groups for popular courses and some one-on-one tutoring by staff and (limited amount by) peers (36 percent participated); 8) workshops: e.g., completing essay exams, rapid reading, note taking, time management.	1) Intensive advising for special admits including orientation, control of registration, course selection, and disbursement of financial aid, multiple advising meetings, midterm evaluations (a third participated); 2) limited academic advising for other participants; 3) 2- and 3-credit courses: sections of college writing, critical reading, academic reading and writing, uses of computer, student success (52 percent participated in one or more); 4) 3-hour weekly study skill labs (i.e., supplemental instruction) for freshman courses: algebra, environmental science, human development (43 percent participated in one or more); 4) 1- or 2-hour weekly study groups for popular courses by staff and (limited amount by) peers (18 percent participated); 5) workshops: e.g., completing requirements, career planning, note taking, MBTI, pre-professional programs (15 percent participated); 6) ESL tutoring (7 participated)

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Institutional data	Project background data	Main services, 1992	Main services, 1996
The Community: 2-year college within large university, 1,400 students, 50 percent women, 35 percent minority	'92: 260 participants, 54 percent women, 34 percent minority. Full-time director, 3 full-time counselors, 20 peer and graduate student tutors '96: 255 participants, 52 percent women, 56 percent minority. Full-time director (same as '92), 2 full-time counselors, 4 part-time instructors (work up to full time through college and other TRIO programs), a 75 percent time graduate assistant/counselor, 15-hour lab assistant	1) Intrusive advising (with personal, career, financial aid and transfer counseling as needed) for first-year students (160 participants, approx. 4 meetings a quarter), less intrusive for second-year students (100 participants); 2) SSS sections of survival skills and developmental math courses with peer supplemental instruction (34 and 107 participants, respectively); 3) peer tutoring focused on sophomores; 4) career and financial aid workshops; 5) advising and special services for students with disabilities (25 participants)	1) Intrusive advising: combines group and individual sessions with at least 6 meetings each year and an average of 8-10 (all participants); 2) supplemental instruction: 14 sections in a wide array of freshman courses (116 participants); 3) labs for 5 SSS sections of freshman composition (18 per section); 4) 6 sections of precalculus and college algebra (60 participants); 5) cultural and group activities (5-6 events per year, 50-100 each event); 6) leadership development weekend (38 participants); 7) 6-8 member student advisory group (2 meetings a month).

Note: All numerical data are approximate, to protect project identity. Staffing data do not include clerical staff.

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Appendix B

Project Budgetary Information, 1995-96

Project Budgetary Information, 1995-96
(total federal grant awards not shown to protect project identity)

Institutional information	Institutional dollar contribution to project (percentage)	Funds per participant (federal and institutional combined)	Other institutional contributions
Project Surpass: 2-year college, 1,300 students, 66 percent full time, 76 percent women	0	$837.	1) relatively new project facility; 2) new computer center has room reserved for SSS labs
The Bridge: 4-year and graduate university, 18,000 students, 68 percent full time, 54 percent women	0	$792.	1) project facilities adequate, with 5 computers and 6 printers 2) room and board for summer tutor 3) financial aid adjustment necessary for full gift/grant aid to support students during the summer program 4) tutoring priority for SSS participants in tutoring center
Project Support: 4-year historically black college, 4,000 students, 74 percent full time, 59 percent women	0	$1,317.	1) adequate but old project facilities, no air conditioning
Aim High: 4-year college, 4,000 FTE students, 80 percent full time, 63 percent women	11 percent	$932.	1) attractive, well-furnished project offices 2) part-time SSS staff are full-time college staff so they are available to students for more time than that time for which SSS supports them.
The Community: 2-year college within large university, 1,400 students, 50 percent women, 35 percent minority	27 percent	$1,098.	1) adequate office space

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